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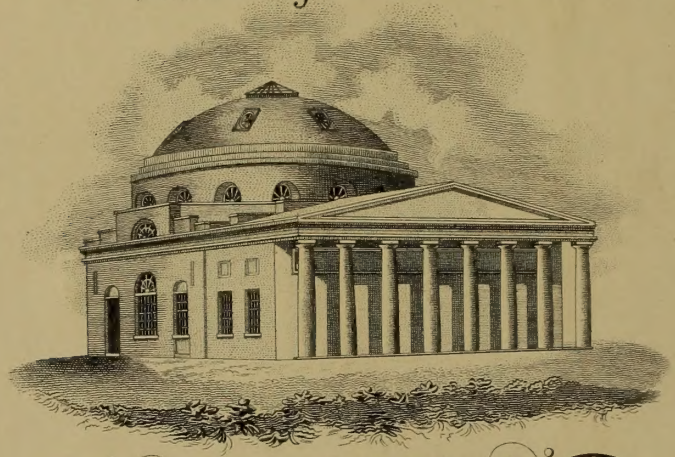

University of Maryland

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(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1867 (a)

Author	Title
Marshall, James S.	Croup
Jennings, William T.	Glucohaemia
Bagby, John	The Sensory Motor Ganglia
Moore, James	Scarlet Fever
Piper, Watson J.	Clinical Report
McLaughlin, Francis X.	Acute Inflammation
Bond, Y. H.	Pneumonia
McGill, Wardlaw	Diphtheria
Slaughter, J. Phillip	Gun Shot Wounds
Thomas, S. Frank	Digestion
Spalding, John T.	Rubeola
Jones, H. H.	The Heart Atomically and Physiologically Considered
Harman, John D.	Scrofulous Ophthalmia
Thomson, Charles	Scarlatina
Hunter, T. Conrad	Opium
Ward, Harrison C.	Typhoid Fever
White, N. Smith	Typhoid Fever

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UNIVERSITY OF MARYLAND

THESES

1867 (a)

Marshall, ~~J.~~ James S.	Croup	27p.
Jennings, ~~W.~~ William T.	Glucohaemia	51p.
Bagby, John	The Sensory Motor Ganglia	20p.
Moore, ~~J.~~ James M.	Scarlet Fever	40p.
Piper, ~~W.~~ Watson J.	Clinical Report	29p.
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Ward, ~~H.~~ Harrison C.	Typhoid Fever	40p.
White, N. ~~S.~~ Smith	Typhoid Fever	28p.

AN

Inaugural Dissertation

ON

Croup

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

James S. Cromwell

Of

Manchester, Maryland

Session of 1841 12

IMb
16946

The disease which I have selected for the subject of the present dissertation has been described under a variety of names; viz Croup. Tracheitis; Cynanche trachealis; Pseudo-membranus Laryngitis, — The essential pathological character of the disease consists in an inflamation of the lining membrane of the larynx and trachea; attended with swelling and pain in the tissues of the part and by the exudation of an albuminous substance commonly termed false membrane Croup on account of its seriousness and danger to early life has been ably and zealously studied by many of the master minds of the profession, who have endeavored to throw light upon a subject so fraught

with interest and advantage to the medical world. True inflammatory croup is one of the most dangerous and alarming fatal affections to which infants and children are liable; sudden in its attack, threating in its symptoms, and rapid in its results; it sweeps over a family leaving behind its distress and dissolution. A disease which is so dreadful in its ravages, which so quickly depresses the vital powers of the system, has worthily received the attention of medical gentlemen in studying its nature and discovering the most efficient means for its relief and cure. Difficult and tedious as these investigations have been they have nevertheless succeeded, and their attempts have been duly rewarded.

croup generally presents itself in three different stages, which have been designated according to the symptoms into those of the precursory stage or stage of invasion; those of the stage of development and those of the collapse or suffocative stage. These divisions are not always clearly defined in common attacks of the disease but their existence is pretty well established in well marked and genuine cases of inflammatory croup. The symptoms of the precussory stage are those generally met with in an ordinary attack of catarrh; the child is cross and feverish, the skin is hot; pulse quick increased thirst; cough and a degree of hoarseness of the voice which is so characteristic of the approach of croup as not easily

overlooked. There is as yet no evidence of serious affection trachea, but a manifestation of uneasiness in the throat, and the cough is short and dry. The breathing is hurried and the stethoscope reveals some slight sibilant râles in the chest. These symptoms on the stage of invasion vary from a few hours to one or two days, after which the more threatening and serious stage of the development sets in with full force. After the symptoms mentioned above have proceeded gradually increasing towards evening, the child is suddenly awaked out of sleep by a sensation of suffocation with a horse ringing cough, hurried and hissing respiration, and a rough voice, with great alarm, agitation and distress. The child presents a terrible aspect in this stage panting

convulsively and eagerly after breath, with spasmodic action of the various muscles, flushed face and with the eyes ready to leave their orbits, The paroxysms of coughing become more frequent and spasmodic, the difficulty of respiration increases, and the efforts of the child are augmented; the arms of the little sufferer are violently tossed about and the evidence of great suffering becomes considerably manifest. The dyspnoea, cough and hoarseness increases during the evening and night, while in the morning the fever cough and other symptoms abate and the child appears improved, This intermission however is deceptive, it may continue for some time but only to gain more strength and renews the attack with greater severity.

The respiration becomes stridulous and the peculiar rough, barking cough, followed by breathing more or less hissing increases great restlessness and sighs of uneasiness in the trachea are experienced, the pulse is quick, hard and small; the skin hot and dry, and the face and head covered with profuse perspiration during the fits of coughing. The respiration increases in difficulty, and the voice in hoarseness; the cough more harassing and convulsive; impending suffocation is threatened. The remissions become less perceptible; the cough more difficult which is followed by vomiting and the expulsion of a glaing mucus mixed with membranous shreads which affords considerably relief to the patients. This relief unfortunatelly is only temporary; since the

croupal respiration becomes permanent — and increases; the voice of the child becomes broken whispering and sometimes wholly suppressed from the pain excited by the severe paroxysms of coughing.
During this stage of development those changes which are so peculiar and significant of the disease become developed; these alterations which give rise to the pathological peculiarity of the secretion of the false membrane are well marked and manifest. After the child has passed these stages which are terrible enough in themselves and frequently overwhelming, there is yet another and more distressing period of suffering on the approach, ready to manifest its terror.

The stage of collapse is characterized by the absence of any remission, the aggravation of all the preceding symptoms, great acceleration and diminished power of the pulse and respiration. The pulse is not only quick and feeble, but often and sometimes generally becomes irregular and intermitting; the cough becomes less frequent, less sonorous and suffocative; the voice low and whispering is sometimes entirely abolished; and all symptoms of threatened suffocation are established. The surface of the child is exceedingly pallid with a dull and livid complexion, the muscles concerned in inspiration are called into powerful action and the motion of the larynx extensively, and incessantly augmented. From this collapsed

and dangerous stage the child very seldom rallies, but is generally carried off by convulsions superinduced by the imperfect supply of aerated blood to the brain. Death ends the scene which has been so terrible in true reality and whose description has by no means been exaggerated.

Thus ends a disease which fixes its power upon the weake and unsteady framework of childhood and hurls many a darling child to an untimely grave.

The assiduity and labor of those indefatigable observers who strew blessings as they pass have done much, have toiled to great advantage in discovering the true nature of this affection which so frequently baffles medical art, and established useful precepts respecting

its rational treatment. The catarrhal variety of croup is exceedingly frequent and common; being the form which seldom proves fatal as is more amenable to proper treatment than the true inflammatory affection. There are still another variety which occurs in children of an irritable nervous temperament and termed spasmodic form of croup, in which the disposition to nervous disorder is more prominent and causing a spasmodic constriction of the trachea. This form is fortunately more manageable and if taken in time, the spasmodic irritation may be relieved before there has been time for the formation of the false membrane; these conditions being relieved the inflammation may either disappear or be modified in its course.

In children who have died in consequence of an attack of true croup various alterations and modifications have been found in the trachea and other tissues to which the inflammatory action has spread. The first evidence of pathological changes produced by the disease is found on inspecting the trachea of one who has fallen a victim to its fearful ravages, to consist in the peculiar character exhibited by the lining membrane; which is of a bright red color, occurring either in patches or in a continuous line often covered with mucus tinged with blood. The characteristic morbid appearance is the false membrane which lines the air passages and placed upon the mucous membrane. This membrane consists

of a layer of lymph, of considerable consistence, of varying thickness and of a yellowish color, lining the larynx and the trachea, extending occasionally into the bronchi; and thus giving evidence of the cause of the extreme suffering and the convulsive grasping after air as manifested by the little patient.

In some cases the expectoration instead of being as above described presents the appearance of a semi liquid substance mixed with pus. Whenever this appears and is expectorated, it is always considered of unfavorable augury in the progress of the disease. Thus far has been but imperfectly shown that all the symptoms which appear in the progress of the disease are fully accounted

for by the pathological lesions found in those who have been carried off by this dreadfull malady. The pathological history of croup is, quite intelligible, the inflammation may commence at first in the submucous tissue, or it may have been primarilly catarrhal, in which case catarrhal symptoms precede those of croup. The inflammation causes an increased sensibility of the contractile fibres and effusion in the lining membrane of the trachea, which results in the constriction of the air tubes and produces the croupy inspiration, cough and attending hoarseness, Lymph is subsequently poured out from the tissues at first fluid and becoming concrete acts by diminishing the calibre of the trachea excites spasmodic contraction,

This false membrane extending into the larynx which being extremely susceptible to the impression produced by any foreign substance is excited and evidences it by the paroxysms of dyspnoea and hoarseness which become extremely imminent and suffocative These changes have others in their train which by preventing the complete entrance into the lungs give rise to those dangerous symptoms of malaeration and extreme peril to collapse which usually takes place in cases of fatal attacks of croup, is evidently dependent upon the improper performance of the function of respiration by which the blood is deprived of its true pabulum and circulates in its impure condition through the brain producing its ill effects upon

the vital powers, which is shown by the lividity of the countenance, coldness of the extremities and surface and general convulsions.
The principal causes of croup appear to be constitutional susceptibility, exposure to a cold, damp, changeable atmosphere, insufficient clothing and finally epidemic miasma. It is more common in winter than in summer which is in a great measure owing to the frequent vicissitudes of the weather and the combined influence cold and moisture upon the delicate membranes of the child. The sudden suppression of cutaneous eruptions, the breathing of noxious and poisonous exhalation may occasionally give origin to the disease.
It may likewise be caused by or supervein

as a sequel of other diseases as measles, scarlatina and other eruptive diseases; likewise from to early exposure to cold during convalescence from febrile complaints,

The diagnosis of the disease is by no means very difficult; the peculiar kind of heating and the loud barking cough in combination with the existance of inflamatory fever lead to a correct judgment of the nature of the disease.

The cough is almost if not entirely peculiar to croup, although the croup attending the catarrhal stage of the exanthemata may be confounded with it; but this will be decided by the presence or absence of other symptoms which belong to the disease, In the more advanced stages

The affections when the peculiar ringing cough has become somewhat modified and the breathing lost much of its peculiar character, the ready diagnosis becomes more difficult.
Other signs failing recourse may be had to auscultation which affords a pretty positive evidence of existence of the disease.
Croup may be distinguished from other affections simulating it, as spasm of the glottis or purely spasmodic croup by the presence of febrile symptoms and the less suddenness and more prominence of the attack. Croup from the violence of the attack is a most serious disease, and if not arrested in the commencement by active and energetic treatment, will lead to a fatal result and sometimes when

thus met by the most efficient means often baffles the most rational treatment. When there is reason to suspect the existence of croup and the disease has manifested itself by the croupy inspiration and oppressed breathing there is great danger, and this continues so long as these symptoms exist. The convulsive paroxysms of cough supervening upon a recent attack brings great danger upon the little patient, either from the sudden suffocation or the invention of a speedy and fatal collapse. On the other hand, when the symptoms diminish in severity, as is shown by the less frequent cough and the amelioration in the state of respiration; by the free expulsion of the false membrane either entire or in patches,

with diminished frequency of the pulse and the universal and healthy diffusion of warmth and colour to the surface, the changes for the childs safty are materially enhanced.

Recovery sometimes takes place when all hope of restoration seems to have feled, when the vital powers have been so depressed that the vital spark has feign left its abode; the system may in good constitutions rally and turn the pending scale in favor of much desired life.

In order that treatment may be successful it should prompt prifely directed; since success depends in a magority of instances on the proper and beneficial choice of appropriate remedies, which by counteracting the inflamatory action may bring about

the desired result. The indications which present themselves in the treatment of the malady are to arrest or subdue inflammatory action and to prevent the formation of false membrane and its accumulation of the same in the air passages. When the period for the accomplishment of the first indication has elapsed and when it is impossible to subdue the inflammatory action, the object to be aimed at is, to procure the discharge of these matters, and to mitigate the spasmodic symptoms which are exceedingly troublesome and dangerous. Thirdly: to support the powers of life, so as to enable the system to expel the matter exuded into the trachea.

These indications are to be fulfilled and the measures most strenuously applied in order

that the disease may be successfully subdued and the patient be benefited by such treatment as medical art is capable of rendering.

When the child is seen early or at the commencement of the attack, venesection may and often does accomplish the indication, viz; to subdue the inflammatory action and thus place the patient in the most favorable position for recovery. This remedy may be either preceded by emetics, which act by clearing the air passages of the mucus which has their been situated and as a direct revulsive to the inflammatory action, Tartar emetic or Ipecacuanha may be employed in sufficiently large doses to insure the effect and followed by diluent solutions so as to keep up considerable nausea, vomiting and thereby the expulsion of whatever

may have accumulated in the trachea should by all means be freely induced, since the detension of these substances greatly add to the difficulty of breathing which is one of the most distressing symptoms. For this purpose a solution of Potass Bicarbonas with Tartar emetic in water may be effectually tried, or a combination of the following consisting of Alum, Syrup of Ginger; Syrup and water has been highly recommended to insure copious emesis. The latter remedies may be employed when from debility of the constitution or from any other compatability Tartarized antimony is contraindicated. This medication will frequently have the effect of arresting or subduing the incipient inflammation and turn the chance in favor of the child. The warm bath is likewise

of great service when the disease is taken early, by derivating to the surface and thereby prevent a lessen the afflux of blood to the irritable tissues In order that this remedy shall be of avail it must be employed early and before the disease has gained the advantage.

These remedies are particularly applicable and advantageous in the first stage of the disease. The second stage or that of promoting the discharge of matter formed in the windpipe requires in great measure the same treatment with some modifications. Calomel combined with Ipecacuanha so as to insure the relaxing effects of the remedy are of great service in this stage The mercurial may be employed in a considerably large dose at first in order to procure a free evacuation of the

bowels is exceedingly beneficial. It may afterwards be employed in smaller doses in order to procure its antiphlogistic effects and thus render the system capable of relieving itself of the foreign substances. Mercurials prove great and decidedly advantageous in the treatment of croup upon the same principles as in other acute inflammatory affections; by resolving the inflammatory action and promoting normal and healthy secretion. Calomel must not necessarily be extended to ptyalism but only so far that the action upon the gums becomes manifest.

This action will accomplish all good which can under the circumstances of the case be expected, and this being accomplished the result becomes in all probality more favorable.

after the foregoing action has become established then remedies are of great advantage which act upon the powers of the system to favor the remedy resolution of existing symptoms.

One of the most efficient remedies is the combination of small doses of Hydrarg. chlor. mitis and tartar emetic to which Ipecacuanha may advantageously added. These remedies or the combination of the above named medicines will when employed in time exert a happy influence upon the disease and aid in relieving the imminent danger which are consequent upon a suffocative paroxysm. In order that these remedies may be of avail and benefit, they must be administered frequently and with undeviating strictness. Subsequent to the use of-

these remedies and of these diseases has not been supplanted or properly relieved, the application of vesicants is of great utility. Vesicants however must be cautiously employed as they frequently cause sloughing of the parts to which they are applied. The most efficient and reliable manner of their employment is to allow the Cantharadis plaster to remain sufficiently long in contact with the cuticle until it is reddened and then the application of a warm poultice, which will speedily produce the desired vesicle. Other means of counterirritants may beneficially be used as the linimentum ammonia and cloths wrung out in Spirits of Turpentine. These may be applied to the throat and upper portion of the chest

and will act as most excellent remedial agents in this stage.

Now, if under this treatment, the disease give way, and the cough become softer, the breathing easier, and the fever less; the employment of expectorant medicines may be successfully employed as the Decoction of Senega, squills and ammonia, with an occasional warm bath. If the coughing be severe an occasional Emetic may be employed or the inhalation of the vapor of warm either as such or rendered more stimulating by the addition of small quantities of champhor so as to enable the expectoration of the exudation to take place the more readily. After all these remedies have been tried and the disease moves on to the last

stage without relief there is great danger if the system be unable to counteract it. In this the last stage, when the inflammatory symptoms have given place to those of prostration and collapse, the only resource is in stimulants & excitants, by which the powers of life may possibly be excited until the adversity of the case may be overcome, Camphor, musk and assafoetidia are applicable in this form by exciting the expulsion of matter, when duly combined with expectorants. When the patient has thus been benefited by the treatment and all things are proceeding favorably and well, the employment of tonics and those means calculated to give tone and energy to the system may be gradually administered, these will

expect, if timely and judiciously applied, a beneficial influence on the condition of the patient. During the attack of croup, the diet should be strictly antiphlogistic, but when the child in consequence of exhaustion, becomes enfeebled light nourishing food of an enstimulating character may be safely administered. The child should be confined, when convalescence takes place to an agreeably warm and well ventilated apartment so as to be secure from the influence of cold. These precautions being observed, everything will go on well and the child find from one of the most terrible and dreadful maladies to which the human family has ever been subjected.

A.I.H.

Inaugural Dissertation

On

Pneumonia

Submitted to the Faculty

of the

Medical Department of the

University of Nashville

for the degree

of

Doctor of Medicine

by

William [illegible]

Entered according to Act of Congress, 1857.

beauties can never cease
which it is calculated to
student as he grows
in his science perfect
with the wonders and beauties of the
her contributions from every branch
presents itself to him as a vast

[illegible]

[illegible] subtle [illegible]

[illegible]

[illegible]

[illegible] to be a grand system of mechanism whose [illegible]

[illegible] that the most [illegible]

[illegible] philosophic

[illegible]

not all, [illegible] still

presented to his study

ies and chemistry. The processes of gestation, nutrition, growth, secretion, motion, and sensation, lower [illegible]

[illegible]

those of a more excavating nature,

of this organized character,
and has hidden in the recesses
of its beautiful apparatus which
records him subject for most intense
thought. He studies all those
processes of life, and becomes acquainted
with the workings of the different
[illegible] In these researches he [illegible]
[illegible] disease. It is in these cases that he will
[illegible] man.

[illegible] he [illegible]
[illegible] which, he does not appreciate; so it

[illegible] anatomy; on the
derangements of the human
by the nature of which is
his understanding. Such is the con-
[illegible] Gifts, viz.
or Glaucoma, which I have select
[illegible] also taken.

[illegible]
the last twenty years has attracted
no little attention from the leading
[illegible]
human mind has suffered in
[illegible]
[illegible] bathing, and the
[illegible] of the vascular tube
[illegible] is attacked in one
[illegible] years.

[illegible] on liver, [illegible]
that the nature of [illegible]

manner which will be better understood if it behoves us to review the symptoms which characterize it.

Glycosuria is the result of a [illegible]

over exertion on which there becomes - [illegible] - due to a [illegible] action of the [illegible]
as glycogen or liver sugar, [illegible]
[illegible] analyzed the [illegible]

The disease is seldom recognized at its [illegible] of commencement [illegible]

[illegible] many stages before it becomes

[illegible] Surgeon

[illegible] in the usual

course been to prate

against the prejudices

which observed by the Patu-

ment desire to innovate

and the unusual surge-

ed at such innovation.

discovery of its inventor

to its utility

[illegible] circumst.

[illegible]

[illegible] to

that the patient was great the

The urine is [illegible]

[illegible] show signs of disorder by vomiting [illegible] symptoms of dyspepsia. The abdomen is brown-red, and can [illegible] the [illegible]. The amount of urine discharged is greatly augmented, as much as twenty [illegible] be as much as fifty pints, and in some instances indeed, the amount is so great, that one would think

[illegible] with for the venal organs
[illegible] the [illegible] of
the [illegible] the [illegible]
increases, the patient [illegible]
quantities of [illegible] were fed with
[illegible] with [illegible]
any increase of flesh; but on the con-
trary, there is a [illegible]
tion, with debility of both body and
mental faculties. The memory [illegible]
[illegible] the [illegible] [illegible]
ruffled; the sound [illegible]

[illegible]
the body and pulmonary organs is
confined by some to that [illegible]
from [illegible] Dr. Watson says that
should not [illegible] the [illegible]

[illegible] to diagnose the dis-
[illegible] the [illegible]
[illegible], - the fever loses their character
[illegible]

[illegible]

[illegible] supervening upon these symptoms are
[illegible]

From the excessive action of the
[illegible]

It often that incurable disease
exhibits albuminuria or nephritis

[illegible] the [illegible] on

[illegible] ingly low State

the [illegible] kidneys; either of these

diseases would, of course, be recognized

[illegible] in which

[illegible]

Pathological action

[illegible]

Witness, which by a close examination affords conclusive testimony

of the character of the disorder.

is of a pale straw-color more

than healthy urine; do. Ph.

higher - healthy urine

1026. This increase

the gravity is due to the presence

sugar which exists in solution

more or less degree, according to the

[illegible] or activity of the malady.

[illegible]

[illegible]

[illegible]

[illegible] solution [illegible]

[illegible] the [illegible]

process known as fermentation, which

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] in test tube, [illegible]

[illegible] is brown.

The mode most generally adopted

[illegible] for ascertaining the

[illegible] of sugar in the urine [illegible]

[illegible] is that known as Trommer's test.

The reaction depends upon the fact

that sugar possesses a [illegible] of

the binoxide of copper.

The process consists in adding a

[illegible] of the solution of sulphate

of copper to a small quantity of the

urine [illegible] to test, then add an excess

[illegible]

[illegible] boiling brings a new
deposit — if the red oxide of copper
[illegible] take place, if sugar is present.
These reactions is sufficient proof for
the attendant to form an accurate
[illegible]
[illegible] in regard to the salts
that exists in the urine when in
the healthy condition, the
[illegible] quantities worthy of [illegible]
[illegible] sugar [illegible]
[illegible] the urine [illegible]
[illegible] can be ascertained, by more
[illegible]
[illegible]
[illegible]

urine, and the larger
the amount of [illegible] present
at the time of the attack, the
[illegible] the greater will be the [illegible]
[illegible] [illegible] [illegible]
the urinary secretion. The [illegible]
treatment [illegible] large [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
tion and disturbances under which
the patient [illegible]

The [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
disease is of a chronic character,

[illegible] [illegible] [illegible]

[illegible] [illegible] [illegible]

[illegible] [illegible] [illegible]

[illegible] evacuations. Then [illegible]

[illegible] fast and exhaust; no evacuation [illegible] whatever, and finally die at an old [illegible] with [illegible] disease [illegible] immediately where the condition [illegible] gave rise to the diabetic [illegible].

Having stated as to how a disease [illegible] in Canada, the most [illegible] characteristics of the disease I would now proceed to [illegible] [illegible] physical [illegible] of the [illegible] which the [illegible] [illegible] are [illegible] [illegible] [illegible]

[illegible]

[illegible]

[illegible]

diabetic urine, he, and all subsequent to
Dr. Prout, naturally accused the kidneys
of the morbid action. These organs suffer-

He argued the existence of sugar in the

[illegible]

[illegible]

[illegible]

[illegible]

was due to some derangement of the [illegible]

[illegible] 1848, when M. Claude Bernard, an eminent Parisian medical scholar announced to the profession, that the blood of diabetic [illegible] contained was rich in sugar, of a peculiar character and by further [illegible] [illegible] [illegible]

the law as promulgated by Bernard
[illegible] Dr Parry an eminent English teacher
[illegible] questions the [illegible]
of the law of the Church of England.
He has by a very elaborate argument
tried to show that the result of his
[illegible] [illegible] [illegible] [illegible]
that the Prayer-Book ought to open
that baptismal sugar does not exist in the
baptismal vine during life, but that it
was a result of post mortem change. He
[illegible] the [illegible] of
the law which he called baptism is
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
that it [illegible] [illegible] [illegible]

as a physiological process will not

[illegible]

[illegible] the Shoulder-joint

[illegible] by the [illegible] wound,

[illegible] upon the [illegible]

[illegible] that [illegible] [illegible]

duty is to inquire into the cause of this

[illegible] in the [illegible] [illegible]

[illegible] in, so far as I am able to ascer-

tain that [illegible] is not a necessary

[illegible] of the [illegible] that [illegible]

[illegible] than is necessary for the

[illegible] moreover that the tissues from some [illegible] not [illegible] when I [illegible] this product. These ideas produced no little confusion upon my mind when I [illegible] [illegible] with them [illegible] I had the [illegible] [illegible] I [illegible] when [illegible] [illegible] [illegible]

in fact the case the urine may be
rich in saccharine matter also, but there
[illegible]
[illegible]
[illegible]

[illegible]

[illegible] or the con-

[illegible] that which has

[illegible]

[illegible] to be eliminated by

[illegible]; so that

[illegible] that sugar is a normal secretion

[illegible]

[illegible]

[illegible] excretory of the glucose

[illegible] other and nothing more. I don't

[illegible]

[illegible]

[illegible] matter. This substance is food and

[illegible] for the tissues and the simple

[illegible] the great oxygenation that [illegible]
[illegible] is impossible
[illegible] It seems to me, it would
[illegible] the winter
[illegible] he will die of inanition.
In regard to the other theory, - that
[illegible] by the tissues, - I will
briefly notice and then pass on [illegible]
few ideas as to the nature of the dis-
ease in question.
It is a law in physiology that the tis-
sues [illegible]
[illegible] a [illegible] material [illegible] is necessary

[illegible] i.e. to its growth, development and functional operations. If this be the case, is it not highly necessary that the blood should be pure, [illegible] [illegible] shall be so arranged, that it may [illegible]

Text Book, (Dalton) informs me, that [illegible] a small trace of it when it arrives in the left side of the heart from which [illegible] throughout the system, consequently sugar in urine and in an abnormal condition and therefore unassimilable. The accumulation

against the tissues is wrong; at least it
would be one by what law. They are requ
to appropriate a substance which
intruded itself into arterial blood
[illegible]
[illegible]
[illegible]

to the theory of "excessive a

[illegible]

How else shall we look to find the nature

[illegible]

the fault lies between the arterioles

[illegible]

organic lesion or functional derangement

in the origin or along the course of the

[illegible]

Claiming this opinion is, 1st. That in

[illegible]

diabetes — the blood in the right

[illegible]

glucose sugar, and in the left vein

[illegible]

[illegible] the head [illegible]

duct. 2nd. That artificial diabetes may be produced by irritating the floor of the fourth ventricle at the origin of the [illegible] will also give rise to the same effect; 3rd. That a [illegible] of the [illegible] nervous stimulant, directing its influence to the spinal cord.

In regard to the first point, it is unnecessary to go into any argument. It is [illegible] that the [illegible] the [illegible]

[illegible] that of the left contain [illegible]
only, or hence, when [illegible]
constituted. But what becomes of the [illegible]
[illegible] to [illegible]
in the lungs. If [illegible]
[illegible]
[illegible] no
[illegible]
this is erroneous; in fact the disease itself
[illegible]
[illegible] that the patient
will live some shorter time after the disease exhausts itself — [illegible]
[illegible]
[illegible]
[illegible] for the [illegible].

[illegible] in which I can see, is that it is in-
[illegible] during the passage through the
[illegible]
[illegible] of the blood probably and unless this
[illegible]
[illegible] in a condition only for assimilation, and
[illegible]
[illegible] be [illegible]
full meal, the blood in the left
[illegible] contain a large quantity of sugar.
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] the Storehouse of the

[illegible] over-[illegible]

[illegible] not; it is labouring energetically to

[illegible] the [illegible]

[illegible] the sugar in excess, they are un-

[illegible] to transport [illegible]

[illegible] it to pass on through, continuing

[illegible] with the view of meeting with it

[illegible]

[illegible] nectarial canal has been exposed

[illegible]

[illegible] It has been giving the reader in

[illegible] that [illegible]

[illegible] sugar is thrown when these organs fa[illegible] the [illegible] [illegible] is [illegible] [illegible] [illegible]

[illegible] through the capillaries and
[illegible] reach the lungs [illegible]
lungs they [illegible]
Sugar when injected into a vessel
[illegible] the appearance [illegible]
Why is this? because it is not in the
proper condition to undergo the
[illegible] which [illegible] [illegible]
[illegible] it [illegible] [illegible] [illegible]
[illegible] assume the character of grape Sugar
[illegible] it will be subjected to the pulmonary
influence. With these thoughts I am
[illegible] [illegible] [illegible]
[illegible] are entered into [illegible]
further [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] that [illegible]

In regard to the 2nd point, it would [illegible] with the [illegible] a detailed account of the numberless experiments that have been reported to, [illegible] [illegible] [illegible]

[illegible]

[illegible] from the influence of [illegible]

the nervous system, is followed by glycosuria; continued mental excitement [illegible]

again, autopsies, of those who have died [illegible]

glycosuria [illegible]

[illegible]

causes tumor pressing on the right pneumogastric. The result of these experiments and observations naturally leads me to suspect a derange[illegible]

[illegible] in the functions of this nerve [illegible]

[illegible] the liver, that [illegible] derange that irritation of this nerve will [illegible] sugar in the urine, I cannot

[illegible] the [illegible] of the transporting function of the liver — again that the effects of this irritation is directed to the liver, causing it to secrete an excessive amount of glucose. If irritation of the glucogenic function [illegible] the saccharine matter, ought not [illegible] the amount of the secretion. [illegible] a few [illegible] [illegible] whatever that it receives now from the [illegible] of the left side.

It is probable that the [illegible] also is a small degree, on the first application of the stimulus; but is not this [illegible] [illegible] so [illegible]

responding [illegible]

[illegible]

What evidence have we then that the sugar makes its appearance in the blood during the excitement; none at all that can be: On the other hand, the phenomena attending the other experiments [illegible] it highly probable that it is due to the depression. In section of the nerve the blood on the left hand is [illegible] impregnated with sugar, but the nerve of the pneumo gastric of the mentioned is completely cut off from the parts to which the nerve is distributed [illegible] the fact that the presence of sugar in the urine does not [illegible] necessarily [illegible] of the nervous centre [illegible]

[illegible] influence, the continued [illegible]

[illegible] doubled, consequently their [illegible]

[illegible] reported by Dr. Pg. [illegible]

filaments of the right dog was in relation

with, and the sugar [illegible] be [illegible] the influence

necessary to complete its effect [illegible]

[illegible]

There can be no doubt but what this agent

[illegible] a temporary molecular death of the

vascular nerve matter; it neither receives

influences, [illegible] influence which
would be a certain degree.

In the same manner, [illegible] rogue, do
moral influences operate, such as financial
troubles, grief, sorrow &c. all depressing
the nervous System.

Diabetes can be accounted for resulting
from the excessive use of alcoholic liquors;
this is apparently a [illegible]
but it is well known, that a depression in
[illegible] strength, [illegible]
[illegible] Thus
[illegible] the Medical Profession
[illegible] cases [illegible] for [illegible]
[illegible] than [illegible] use of
ardent Spirits. [illegible]
drinkers are not attacked with the disease

[illegible] easy to account for; unless, it is [illegible] of the continual action of the respiratory centre by which means [illegible] the lungs through [illegible] poison, —

Is it the action of the oxygen which the lungs [illegible] in the lungs [illegible] which will [illegible] to [illegible] [illegible] the [illegible] [illegible] [illegible]

[illegible] In regard to the digestive organs: I see no reason why the diet should be modified or any therapeutical agents [illegible] that would exert any influence directly on these organs; as a general thing the patient's appetite is good and [illegible] by morning, the bowels in [illegible] condition, in which case a gentle cathartic may be given; further than this, the alimentary canal seldom presents any abnormality of its functions or organic [illegible] in [illegible] sequence. The gastric and intestinal juices the biliary [illegible] secretions, so far as I am able to learn, which is a little remarkable, when we consider the de-
[illegible]

[illegible] disturbance of the digestive organs, [illegible] no doubt, [illegible] [illegible] [illegible] general condition of the [illegible] the tissues [illegible] [illegible] as well as the organs of [illegible] [illegible] not due to any derangement of these [illegible] [illegible] there will be [illegible] [illegible] reference to the diet a few remarks will be [illegible] These are ten diet [illegible] [illegible] treatment of [illegible]; some urging

[illegible] withholding from the Patriot all articles of food at a [illegible]

[illegible] these proximate principles in [illegible] the [illegible] that [illegible] life may be derived by feeding the patient, large [illegible] [illegible] Barnard stated beet sugar is an animal containing as well as [illegible] proving that the liver could manufacture sugar out of [illegible] acid with the same facility as it does in those animals whose ali-

[illegible] to we with-hold from the [illegible] not vegetable food be necessarily [illegible] [illegible] [illegible]

8 or 10 m. daily, stating that
the Sh. or was lessened: the amount of
sugar & urine both diminished in quan-
tity and that the patients held the
urine some better than when they
came in. I am unable to see any rea-
[illegible] for this mode of treatment
[illegible] the system, of which, the skin
[illegible]
[illegible]
a healthy individual this amount
[illegible]
have all the elements necessary for
the blood making process. It is how

[illegible]

[illegible]

[illegible]

[illegible] to the former; that in diabetes [illegible] the former [illegible] evidence of a depressed condition of the [illegible] or that, there might be some lesion in the course of the 10th pair interfering with passage of nerve force from its origin; consequently nervous stimulants are indicated, and to meet this we have [illegible] wanted to in stating our reasons for promulgating the theory which [illegible] advanced. Dr. Pitts also 2 medicants in this University, Doctor Van Bib- [illegible]

[illegible] to the class of young men suffering with this disease. He [illegible]

[illegible]

The Doctor ordered the patient on a [illegible] diet of eggs and meat, as the following prescription

[illegible]

Rx. Vert. Sulp. Zinc.

Strychnia

M. Pill. No. [illegible]

The patient took one of these pills after eating. ——— He was directed to take exercise in the fresh air and abstain [illegible] incompatible with health. The result

[illegible] in a few weeks the patient was
[illegible] cured, and is now at the time
of this writing [illegible]
[illegible] strongly [illegible]
with the belief that the [illegible]
[illegible] effected the cure. This agent ex-
erts its influence solely on the spinal
[illegible] the [illegible]
[illegible] that its effects are [illegible]
on a weak point in this nervous centre
before it is in a sound part because the
unused portion has lost power to [illegible]
the influence of the medicine. Do
it cured the disease? By bringing about
a new condition in the pathological
organ: the sugar is not allowed to pass
through the kidneys in such large quan-

[illegible] suppose that change which renders [illegible]

In connection with the Hypochondria, I [illegible] have the patient [illegible] [illegible] Phosphorus [illegible] [illegible] [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

and all that is required.

[illegible]

[illegible]

remains to be done.

Signed. Respectfully

William Thomas Jennings

[illegible]

An Inaugural Dissertation

On

The Sensory & Motor Ganglia.

submitted

to the Examination of the

Provost, Regents & Faculty

of

PHYSIC

OF

The University of Md.:

FOR THE DEGREE OF

Doctor of Medicine

By

John Bagby.

King and Queen Co. Va.

Session of 1866-7.

Sensory Motor Ganglia;

In selecting this subject for a Thesis I am aware of the difficulties and obscurities which veil it – and I would not be vain enough to hope that I could elucidate it by anything I may write concerning it, nor would I allow the difficulties it presents to intimidate me from the attempt to learn of it all that is possible. Its obscurities do not detract from its interest to men of researches & knowledge, and he who undertakes to make himself acquainted with

the model of the Creator's work-man
fashioned after the image of his
Maker - will stop short of the ac-
-complishment of his task, in
case of this - one of the most exalted
of his organs - in account of its
mysteries. And the scientific man
may find food for thought and
matter for experiment to employ
a life time; and when he has ac-
-complished his aim, and his sensory
ganglia shall cease to guide him
in his research, generations to follow
will still find an unexplored
labyrinth of mysteries.
It is useless for me to enumerate
the many difficulties which surround

this subject, suffice it to say, that no sense of difficulty in our way lies in the circumstance that physiologists have not yet been able to determine with any degree of certainty what share the several parts of the cerebro-spinal mass have in regulating, respectively, the functions which all acknowledge to belong to the nervous system in the aggregate. Yet we will be amply rewarded if we can succeed in establishing the point at which we aim, viz:. No matter what stimuli be the remote cause of the motion, it is always the sensory ganglia which is the immediate source of the motor impulse sent to the muscle,

These ganglia are found at the base of the brain, and are five in number, viz: 1st The Gustatory are located in the interior of the substance of the sensory tract of the Medulla Oblongata; and are the centres of the special s... of taste.

2nd The Auditory lie in the floor of the fourth ventricle, on the posterior surface of the Medulla Oblongata; and are the centres of the special sense of hearing.

3d The Corpora Quadrigemina are located on the tops of the olivary tracts, and lie posteriorly to the third ventricle. This pair is the centre of the special sense of vision.

4th The Thalami Optici lying in advance

of the Tubercula quadrigemina in the posterior pyramidal tracts, assuming the lateral boundary of the third ventricle, thus represent the special sense of touch.

5th. The Olfactory ganglia are situated at the base of the cerebrum, one on each side of the longitudinal fissure, lying on the cribriform plates of the ethmoid bone, they are the centers of the special sense of smell.

That these are the ce[illegible] of the special senses, is proven by removing cerebral hemispheres and allowing these ganglia to remain, & it is seen that the senses are all preserved, but if these ganglia be removed, or destroy, the senses which

such compound will be destroyed.
This is further proven by having the nerve of special sense to these gaseous vapors by. Thus if we take the first pair of nerves which are distributed to the mucous mem-brane lining the nares, and we find they are susceptible to only one kind of impression, viz: that of the irritation from odiferous substances, if they are irritated there is no sensation experienced for there is no manifestation of pain, and since they are distributed alone to the schneidrian membrane it does not carry motor influence to any muscle whatever. Pathological evidence goes to prove that the loss of the sense of smell is caused by a morbid condition

of, either the olfactory ganglia, or nerves.
In like manner may we point to the tubercula quadrigemina to be the centers of vision. For the second pair of nerves, which proceed from them can be traced to their distribution in the retina; and if either the nerves or the ganglia be destroyed it results in the loss of vision, while the common sensibility of the eye will remain. But, unlike the former, it seems to be endowed with the power of exciting the reflex action of the muscles of the iris. Another peculiarity of this pair of nerves consists in the total decussation of the fibers of the nerves in the optic chiasm in those animals in which the optic

of vision of the two eyes are totally distinct.
While in man and in some of the higher
animals this decussation is only partial
In man this crossing is very singular, it
exists in the consent of action when
in organs of vision. There is direct com-
-munication between the two ganglia,
the posterior fibres of the crossing commis-
-sure. In like manner the anterior
fibres connect the two olivary; while
the fibres of the right ganglion run to
the [illegible] of both eyes & those of
the right to the left side.
That these ganglia are centres of sensa
-tional consciousness independently of
the mind & the cerebrum has been
proven by experiments performed on

a sign; in what [illegible] should sometimes
now remain, The bird presented
manifestations of consciousness in
such a marked degree that its existence
could not be doubted, it could stand
not. There was indications of consciousness
as light by the fact that its "eye would
contract and lids close" when a light
would impinge suddenly upon it, as placed
in a partially illuminated room it would
seek the points of entrance of light and
can avoid objects placed in its way,
However when a lighted candle was placed
in a circle upon it the animal ex-
-cited a corresponding movement with
its head, Although the bird was usually
in a comatose state it could be aroused.

or a noise, and it would simulate into the state of a mania resembling that of loss of memory. The other sense could be acted upon in the same manner, by making an impression on the sensorium of each organ of sense, to prove that sensational concussions existed independently of the brain.

Thus an entire if concussions of our mental states, as inferred from auscultation, as the impressions made upon the retina are conveyed to the Tubercula Quadrigemina, we from our accurate conclusions of those impressions, we infer that the impressions made by the mind on the cerebral tunics, such as they have been found not to be the

centre of consciousness must be carried to some centre, and as there are centres of consciousness of our external senses, we assign to them the same office for the "internal senses".

This would be inferred from the fact, - we perceived in unconscious mental activity, in the "unconscious cerebration" of Dr Carpenter, for which we often find after pursuing a train of thought for an indefinite time without being able to arrive at a conclusion - the mind - wind wand so much overtaxed by him who thinks, - when we have ceased to think of it - so far as we are conscious - we are surprised, by the sudden revelation of the conclusion, to know that the most

prized of all our faculties, has not been idle lately as we have reason to look. Prof. Sir William Hamilton found that the mind has been acting all the while lately not with sufficient force to arouse the Sensory Ganglia. Our brain we have not become conscious of its action. Thus we see, that though the cerebral hemispheres may act, yet we are not conscious of their action until their impressions are conveyed to some other organs and through their aid we are made conscious of the conditions of the mind.

"In every act of consciousness the recognition of the identity of bodily and mental self are inseparable", Hence as we

have seen that the recognition of bodily self depends upon sensation, or that the impressions made on the external organs of sense must be conveyed to the Sensory Ganglia before we can become conscious of these impressions. It follows further that these must be centres of mental consciousness.

They are centres of reflex action, produced by the transference of any of the peculiar impressions (which are necessary for the production of the peculiar sense) to the different ganglia. In those animals where the Sensory Ganglia are the highest nerve centres the impressions which are carried

by the afferent nerves to the sensory ganglia, & which then produce the sensation, react immediately upon the motor nerves & thus are the reflex actions generated. But in man these sensations being made in the sensorium are thence reflected to the cerebral hemispheres, and then the reason is brought into exercise, and ideas generated which operate by means of the will or emotions through the sensory ganglia on the operations of motion. Thus reflex acts are seen in man when too intense a light falls on the retina; it causing the immediate contraction of the

iris, or closure of the lids and thus by protection is afforded the sensitive membrane. That this is a reflex action, in which the impression of the intense light is the originating cause, is manifest from the fact that this contraction of the iris will not take place if the optic nerve which carries the impression from the retina, or the Tubercular Quadrigemina which receive this impression be removed, nor if the motor nerve of the iris (third pair) be destroyed.

They are also seen in the pedestrian as he winds his way along the crowded street absorbed in thought

on some interesting topic, or perhaps he thinks of his business and in the reverie of the moment he forgets himself, still he avoids the passers by and will not precipitate himself against the lamp, post or stumble into the sewer because the sense of vision is on the alert and warns the sensory Ganglia of danger and immediately a courier is dispatched through the motor nerves with power to guide the muscles in those movements which are necessary for the safety of the man. It may seem that these movements are excito-motor, But as Dr C. says, "The guidance of these movements by

the visual sense invokes the participation of the Sensorium in this remarkable performance."

They are centres for generating material impulses in response to impressions received from the periphery of the cerebral hemispheres, the will being the stimulating agent, and the periphery of the cerebrum being the part analogous to the retina in sensation of vision. The only difference in the two kinds of acts being that in the sensory reflex acts the external world is the stimulating agent, and in the voluntary or psychic reflex acts the will is the stimulating agent which makes an impression on the

periphery of the cerebral hemispheres and this impression is conveyed to the sensory ganglia, by sensation fibres proceeding thence, and they cause them to be reflected through the motor channels to the parts desired to be moved. That the power of the will is not effective without the guidance or aid of the sensory ganglia, is proven by the fact that we cannot perform any movement we wish without the aid of one or more of the senses. For example; if sensation be lost in the hand and arm, though the power of motion remains and by willing we can move the limb, yet we cannot hold any object

or execute any definite movement while the eyes are averted, but with the aid of the sense of vision the movements can be executed as we will. Many examples may be cited to prove the dependence of the will on the Sensory Ganglia for the complete accomplishment of its ends.

Besides the voluntary movements which are psychico reflex; i.e. originate in a psychical impression which is conducted from the hemispheres to the Sensory Ganglia and thence reflected to the motor nerves, there are two other classes of psychico reflex actions, viz:. the motions which

express our emotions, and those which express our ideas or thoughts. Here as in the case of a bilateral determination there is a psychical impression in the hemispheres, a conduction to the Sensorium; and then in addition to the act of consciousness there is a transfer to the motor nerve.

Very respectfully,
Lou Bagby.

Feby 11th 1869.

AN

Inaugural Dissertation

ON

Scarlet Fever

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

James M. Moore

Of

Maryland

Session of 1866-7.

Scarlet Fever.

How many young innocents of the human family have fallen victims to this terrible malady. The parent sits down in the evening surrounded by a group of little ones, the objects of affection: he looks around – he casts his eyes upon those smiling little faces, their merry voices ringing in his ear, making glad his heart and filling his soul with delightful anticipations: and ere another week has rolled round most of them

are wrapped in the cold embrace of death. The mother goes to the couch where lies her loved idol, to which her cares and anxieties are hourly being given, and leaves it peacefully resting in sweet and innocent slumber, no harbinger giving token of the sorrow that is approaching to blast her fondest hopes; and ere the morn has dawned upon her and the stars have faded from the sky, it lies prostrate by disease, the powers of life fast ebbing away, and at the close of the Eve sleeps in death.

It is not because of the rapidity only with which the disease

runs its course, that we look upon Scarlet Fever with so much fear and dread. There is not a single disease to which the human system is liable that is more treacherous. Cases apparently of the mildest form frequently develop symptoms that are truly formidable in their nature, during the progress of the disease, and terminate fatally, despite the best directed efforts of the skillful Practitioner to pervert their mortal tendency: others are followed by the most fearful and painful Sequelae, which eventually prostrate the vital powers and

establish morbid conditions which last for years, or even for life.

Such is the disease, the character causes and treatment of which I shall now endeavor to investigate.

The term, Scarlet Fever, is derived from the circumstance that it is generally accompanied by a florid rash, which makes its appearance on the surface of the body. According to some of the best Authors there are three distinct varieties of this disease, which are regarded as the same disease presented under different aspects: there may

be further subdivisions made, but the most important are: The Scarletina Simplex, the Scarletina Anginosa and the Scarletina Maligna. The Scarletina simplex is that form of the disease in which there is a rash appearing on the surface, with little or no sore throat; the Scarletina Anginosa is that in which there are well marked symptoms that the disease is committing its violence through the affection both of the skin and the throat; and in Scarletina Maligna there is frequently very slight eruption on the skin, the disease giving vent to itself

more particularly by the throat.

Now as the first of these three varieties is the primary condition of the disease it shall be the first to demand attention.

This disease, in the majority of cases, makes its first appearance very unexpectedly indeed. It generally comes on in the night. During the day the child is busy at his usual play, as one in a perfect state of health - eats heartily during the day, and when night comes, retires to bed perfectly well and hearty - Sleeps sound during the earlier part of the night, then wakes up with

a sick stomach and a violently heated skin and becomes feverish and fretful; and in the morning on examination the face, neck and breast are found covered with a rash, consisting of multitudes of little red points, which under pressure will disappear, and return again when the pressure is removed. The pulse beats with great rapidity, thus indicating the violent action of the heart, which alone may be regarded as one of the diagnostic signs of Scarlet Fever. The tongue is coated with a white fur, through which red points project; upon further investigation

the mucous membrane of the mouth and fauces is seen to be inflamed, with numerous red spots presenting themselves on the surface. These are the ordinary symptoms of a case of simple Scarlet Fever. The disease having been thus ushered in, makes rapid progress, the rash extending over the whole surface of the body, and then to the extremities: And at the end of about the third day from the first invasion, that which first made its appearance, begins gradually to disappear, the ordinary termination of the disease, in its primary stages being

in five days, sometimes, but rarely exceeding seven days. The fever does not abate or subside in this disease after the appearance of the eruption, but continues through its course: the pulse, which is seldom less than 120 per minute, remains about the same, there being no diminution in the temperature of the skin, which sometimes rises to 110° Farenheit. In some cases of Scarlet Fever, parts of the red surface are found to be studded with numerous little vesicles, which contain a colorless liquid, and which are sometimes called Su-

damina. According to Dr. Watson these little vesicles abound mostly on the thorax and front and sides of the neck. The liquid in these vesicles is reabsorbed and the cuticle forming them shrivels up turns white and falls off in the shape of a white scurf, giving to the parts a powdered appearance. In the mild form the functions of the skin are impaired: the tongue, which in the begining was coated with a thick white fur, begins to throw it off about the second or third day, commencing at the apex and sides; sometimes when denuded

entirely it is but slightly reddened and sometimes it becomes very much reddened and raw, and is called the Strawberry tongue. Frequently the symptoms are so mild in Simple Scarlet Fever, and so little functional disturbance of the nervous system that the patient may pass through all the stages of the disease, and nothing be required but the observance of simple hygienic measures: But it is not so in all cases of the mild form: the nausea and vomiting, which I have already mentioned as one of the premonitory signs, are not unfre-

quently accompanied or followed by convulsions of a very serious character, and difficult to control. Sometimes there is Coma and Delirium, which are characterized by the patient's crying aloud, and suddenly rousing from sleep.

As the rash fades and disappears it leaves the parts covered with a dry harsh cuticle, which peals off in scales. The desquamation which thus goes on is said to be peculiar to the disease, since it has been known to occur even in cases in which there was no eruption or heated surface. The cause of this invariable desquam-

ation of the cuticle, is attributed to that specific influence which the miasmatic poison has over the dermis, and not to the swelling and inflammation of the dermis.

In the Anginose form of Scarlet Fever, there are the same morbid conditions, which manifest a greater degree of violence, with which the poison has been operating. The rash may be more lively, and present itself over a more extensive surface of the body, confining itself chiefly to the feet and ankles. In this form the nervous system is more gener-

ally affected: and the throat upon examination will be seen to present not only that reddened aspect, as in the former case, but a greater amount of turgidity and swelling. From the very first in sanguinose cases, there are abundant mucus secretions, which cling to the tonsils and to the palate, sometimes obstructing the nasal passages, thus giving rise to much suffering and pain. Under these circumstances the free access of air is prevented, and the oxygenation of the blood accordingly impeded; which must needs increase the dangers of the

case. The disease runs on, the inflammation of the mouth and fauces becoming more and more violent, with ulceration and finally sloughing. The obstructions of the ~~nasal~~ passages are sometimes so great that the child cannot breathe, save with much labor and pain; nor swallow any liquid — the tongue casts off its white coat, which characterized its condition in the mild form, becoming much reddened and inflamed at the sides and apex; the lips also partake of the inflammatory swelling, and are dry and sore, so that they bleed at

almost every movement of the mouth. However, notwithstanding these unpleasant symptoms, the case is not to be regarded as hopeless; but under judicious treatment and careful management may recover.

In the variety called Scarlatina Maligna, the rash comes out very imperfectly, which is generally of a bluish tint; it makes its appearance at a late period; sometimes suddenly disappearing and then reappearing. There is great prostration of the vital powers the vomiting is violent and there is great pain in the arms and legs.

The temperature of the body is fluctuating; in cases of extreme prostration the skin is cold - the throat is fearfully swollen, the uvula, tonsils and soft palate are flaccid, upon the surfaces of which are deposited black lymph in large quantities; a discharge of fetid matter takes place from the nostrils, and the atmosphere of the room is contaminated by the offensive effluvia arising therefrom. Frequently, under these circumstances the patient becomes rapidly exhausted from the malignant effects of the poison, and dies in a few hours. In this

variety of the disease, the Prognosis is unfavorable: medicine can accomplish but little — the obstinacy of the disease seems beyond its control.

There is another variety which it may be necessary to give some notice, which is called Scarlatina Latens. In this there are no diagnostic symptoms, in which to place much reliance: no sore throat, and no rash; but simply a little fever, followed by the scaling off of the cuticle, and sometimes Anasarca. This is the case in some Epidemics. These not unfrequently terminate

fatally.

Children who have suffered severely from Scarlet Fever, are apt to become scrofulous - taking on many chronic forms of that disease. Boils ulcers scrofulous swellings of the glands of the neck and of the lips, with inflammation of the eyes, which assumes a chronic character. Another very common and in fact, one of the most common sequels of Scarlet Fever is Anasarca; which is sometimes very serious; there is serous effusion in the areolar tissue; very often extending to dropsy of the larger cavities: these are frequently accompanied

with fever, and are called febrile dropsies: they are more common after the attack of the mild than the severer form of Scarlet Fever, a circumstance thought to be due to the fact that in the milder cases, there is not so much care or caution taken during the period at which the scaling off of the cuticle takes place. The patient after the fever has subsided, goes out, or is exposed to sudden draughts of cold air, which circumstances have a tendency to prevent the escape of the miasm from the body: the new cuticle just forming is soft and inexpa-

ble of resisting the influence of the cold air. This dropsical affection is more common in children than in aged persons: it seldom occurs in patients beyond ten or twelve years of age.

As to the cause of Scarlet Fever many different opinions have been entertained. It depends, of course, on some unknown agency, producing epidemic influence; but in what that influence consists, it is beyond our present means to find out. The most important point in reference to this troublesome malady is, is it contagious; does

it propagate itself by contagion? It certainly does: its immediate cause is contagion. This contagious poison, whatever it may be, is a very subtle agent, it clings to clothes, and to articles of furniture: and strange to say, it remains for a long while, still being capable of propagating itself whenever an individual is exposed to its influence. Scarlet Fever is a disease that is almost exclusively confined to children; few children escape its contagion. The most malignant type of the disease may

be taken from the mildest case; and *vice versa*, the mildest may be taken from the most malignant form. This disease seldom ever makes its appearance a second time.

It has been over two Centuries since Scarlet Fever was first known on this Continent, at least as a distinct disease. It is thought to have existed for a long time, and to have been confounded with Measles; the differential characteristics of the two diseases were first described by Dr. Withering.

The first onset of Scarlet Fever

is first marked by vomiting and sick stomach, thus fixing it and the passages leading to it as the organs involved. While Measles ~~are~~ is generally ushered in by catarrh, sneezing, a slight inflammation of the Conjunctiva, with Cough and hoarseness: indicating the tendency of the disease to fix on the respiratory passages. Again there ~~are~~ is in Scarlet Fever, especially in the severe Anginose and Malignant forms, extensive inflammation and ulceration of throat, which are necessary concomitants of those forms of the disease. There is also

a difference between the eruptions of the two diseases: in measles the rash stands out more prominently on the face, and is of a darker hue: the papulae are clustered together in semilunar forms leaving between them spaces of healthy skin. The rash in scarlet fever consists in numerous little red points which seem so crowded together as to present a universal redness over the surface; then be, in in the face neck and chest, thence proceeding to the extremities, until the entire surface is covered with the same characteristic blush. The papulae are of a deep scarlet

color, which is generally most marked about the folds of the body, the groins, the flexures of the joints &c. Usually the eruption in Scarlet Fever comes out on the second day, while that of Measles does not make its appearance till the third or fourth, and sometimes the fifth day. But notwithstanding the difference between those two diseases, frequently is one mistaken for the other: that is Measles may be taken for a mild case of Scarlet Fever; but it is only in the simple forms of that disease that we are sometimes misled. In the Anginose and Malignant forms, there can be no misjudgement. But

in every case in which the invasion has been marked with fever and sick stomach, and the appearance of rash within forty eight hours, Scarlet Fever may be suspected: Having thus pronounced in our own minds the Prognosis of the disease, we should proceed to investigate its history and examine well the symptoms in order to know the best mode of treatment.

The susceptibility to the influence of the miasm producing Scarlet Fever is different in different individuals being greater in some than in others.

Scarlet Fever has a fixed period, being from five to seven days, at

the close of which time the diseased action naturally ceases, unless the functional disturbances have been so great as to destroy life, or such lesions have been produced as tend to keep up the irritative influence.

In regard to the mortality of this disease, death is liable to occur from the disordered condition of the nervous system in twenty four hours. If this danger is once overcome the patient will linger to the end of the first week. Proportionally the greatest mortality is found to be in the 2d week, and is due as its cause, to inflammation of the brain and lungs, or the violent depression of

the vital powers. It necessarily follows, therefore, that the Prognosis must be indefinite. Our Prognosis should not be too hastily pronounced. 2nd From the nature and Character of the disease we should not be rash in giving our opinion as to the issue, but rather look upon the case, as it runs its course, with caution and with care. There is no case so terrible in its aspects that we may not at least hope for recovery: nor is there on the other hand, any case so trivial in its symptoms as to afford unalloyed anticipations as to the result. In the simple type of Scarlet Fever the Prognosis is much

more favorable than in the Adynamic case, and much less in this than the malignant. One of the most favorable signs in any of the forms, is a hot perspiration. Another very favorable sign is the reduction of the heat of the skin, that is if it do not fall below the normal temperature of the body. The condition of the urine also is a sign to which much is attached to aid us in framing our Prognosis. So long as the quantity passed, is normal, or nearly so, and there are no deposits of blood, and there is no albumen detected by the regular tests, these need be but little feared in giving a favorable Prognosis.

scarlet fever should be treated according to the nature of the case; the symptoms should be treated as they manifest themselves in the progress of the disease. First in the treatment of the simple form of the disease, little else than good hygienic measures is necessary. If the patient is inclined to be costive, mild laxatives should be given. The patient should be kept in bed and subjected to a very spare diet: Cooling draughts acidulated a little, and where the skin is much heated, with severe burning sensations, cold sponging are the means found to be the most highly useful. Lemonade

is a very good form of drink and may be given with good effect. Often in the begining of the disease an emetic is found to be beneficial.

In Scarlatina Anginosa, when the patient suffers from intense heat and burning of the skin, cold or tepid sponging should be employed.

Should Delirium supervene, the scalp should be shaved and cold applications made use of; and if the pulse is high and strong, some blood may be taken away by application of leeches behind the ears. If the fever be high with violent Delirium blood may be taken from the arm, which, however, should be

done with much caution, at the same time noting the result. Acid tonics are useful. Where there are no cerebral disturbances to cope with, all that can be done is to regulate the bowels by mild laxatives — In this form of the disorder the principles of treatment are: not to interfere unnecessarily; to take blood when the symptoms demand it, but to take no more than what is sufficient to have the desired effect. In the Malignant form of scarlet fever, all our efforts — cases — anxieties will frequently be in vain. The patients sometimes rapidly sink under the first

impression of the poison on the system, with but little affection either of the throat or of the skin. Such cases can only be saved, if saved at all, by stimulants. A liberal use of wine and Cinchona may be resorted to to sustain the flagging powers of life, until the poison has in some measure passed away.

The throat becomes ulcerated and gangrenous, when the patient does not die from the first impression; in this case the system is reinoculated by the morbid secretions of the throat, under which circumstances also Quinia & Wine may be carefully given. Gargles also should

be employed to modify the ~~secretions~~ condition of the throat and to check the liabilities to further inoculation of the system with the poison. Chloride of Soda ~~in solution~~ solution may be of [illegible] use in this way; or a solution of the nitrate of silver; but about the best gargle is made by infusing an ounce of red pepper in a pint of boiling vinegar and water. If the patient be too young to use the gargle, it may be applied by means of a probang, or it may be injected into the nostrils and fauces by a syringe. A solution of the Chlorate of Potass (ʒi to ℥i) in water makes a good drink for patients, in Scarlet Fever — Chlorine is

considered to be a good remedy: it may be used both externally and internally. The condition of the bowels should be attended to, and not allowed to become costive. The patient should not be allowed to leave his room i.e. soon after his general condition has began to improve; nor to be exposed in any way to a cold damp atmosphere, during his convalescence as many troublesome sequelae are apt to follow — dropical symptoms are apt to appear as a consequence of the neglect of hygienic measures in the convalescent condition of the patient. If however they do come on, and are acute, they may be diminished

by purgatives and Digitalis — under these circumstances the patients are pale and sanguine — to relieve this condition, the muriated tincture of iron with tincture of foxglove may be given with good effect. Diaphoretic agents are also highly useful, in addition to which a warm bath may be had recourse to — repeating it every night, according as the case may demand — To modify the contagious influence of scarlatina, and ~~to~~ obviate, perhaps entirely the dangers of communication, Belladonna has been found to be of exceeding value: and much testimony has been produced by different Authors in favor of

its being a great preventative.
The mode of exhibition recommended is, to dissolve three grains of the extract in an ounce of distilled water: of this two or three drops may be administered twice a day to a child under one year of age, increasing the dose one drop for every year.

Lastly, when the disease has run its course - all the remedial measures having been employed by the physician to his own satisfaction and that of the anxious Mother, it is to be borne in mind that the child, although apparently well and in a fair way to regain its former good health, is not to be regarded

as free from the perils attendant upon too sudden exposure. It is therefore the duty of the Physician to impress this fact on the mind of the Mother or Nurse, in order that she may be awake to the serious consequences that are apt to follow imprudence.

1867

A Clinical Report

Submitted to the examination

of the

Provost Regent & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

W. J. Piper

of

Maryland

The time has at last arrived for me to place before you Gentlemen Faculty of the University of Maryland either a Thesis or Clinical Report. Of the two I have chosen the latter, conceiving that it may meet with your approbation. The cases from which the following report is taken were patients admitted into the Baltimore Infirmary and treated under the supervision of a member of learned trade Dr. Frank Hamilton. The treatment in all cases the supporting so highly recommended

by Todd, Chambers, Flint and many other distinguished physicians of the present day. With this final introductory paragraph I to thank you for your kindness while connected with the Bellevue Infirmary and proceed with my report—

W. J. Fisher

Case 1st Emily Watkins, a native of Baltimore fourteen years of age, by occupation a servant, was admitted into the Baltimore Infirmary Apr. 10th 1861. She has been sick one week. Has always been healthy, and never has had any sickness, save an attack of pleurisy, which only lasted a few days; this was about two months ago. She is living in a healthy part of the city, and never has had any chills. The present attack commenced about ~~one~~ one week ago, with severe pain in right side which has continued up to the present time though not as severe as formerly.

Is at this time suffering with severe
pain in the head and the right side:
bowels have been regular, and passes
urine freely: has cough which is
worse at night and causes pain
in the whole chest, mouth dry, tongue
dry and coated: expectoration white;
and very tenacious: dullness on percussion
over the whole right side, both anteriorly
and posteriorly, by auscultation a fine
crepitant râle is indistinctly heard,
pulse 116 and very weak respiration 36
and hurried. Diagnosis some deep seated
pneumonia with probable some
tubercular trouble. The following treatment
was ordered. Rx Quinin Sulphas grij
every three hours

Sept 4 – Sept 5th Tuesday

Night 12 to 3 AM 5 in bowels
[illegible] hours. After 11th Patient rested
well last night; expression of Countenance
better. Skin moist, the right lung is
a little more fully distended, more
expansion has taken place; pulse 92
soft than yesterday; respiration 24
and less hurried. Evening, pulse 92
and soft; respiration 22 and easy;
expectoration has increased in quantity
otherwise no material change.

12th Patient is improving very fast.
Slept [illegible] last night. Cough not so
deep, breathing respiration much
less than yesterday, skin moist
breathing not in the least disturbed

Treatment has changed to-day, the hot
bath has stopped, and the tinct.
Sulph has been reduced gtt iv in twenty
four hours. Diet. Mice broth, with
bread butter and meat at dinner.
Evening. Patient still complains
of pain in chest, seems much
disposed to sleep, is drowsy all
the time, cough has not troubled
her to-day, breathing considerably
oppressed, pulse 88 full regular
and soft — respiration 40 but
easy. Some rust colored sputum
made its appearance for the
first time to-day. The dullness has
cleared up considerably, remains only at the
upper part of the lung, general expression

of countenance better; Skin moist.

13th Patient does not seem quite so well as yesterday, still dullness, and bronchio vesicular respiration over top of right lung, pulse 84, respiration 34. Evening, Patient much better, pulse 86, respiration 24. the sputa is clearing up again. also the dullness from the tightness in clearing up of lung gives hope of simple acute disease.

14th Patient improving very fast; does not complain of any pain; cough is much better; expectoration almost healthy, Skin moist and of a healthy temperature, can take a long breath without any inconvenience; pulse 80

respiration 28. Evening. The general condition much better, pulse and respiration, same as this morning; bowels have not been moved for four days

16th. Patient is mending rapidly; appetite good, tongue moist, but some little furred, pulse 64, and occasionally intermittent: respiration 20, and easy, patient can sit up without any great inconvenience, the lung has entirely cleared up, with the exception of a little prolonged expiration at the bifurcation of the trachea. All treatment was stopped to day and full diet ordered. 17th Patient is walking about the room and was pronounced convalescent

Case 2d. Eliza Larkin, a native of this city by c[illegible] is ten years of age: was admitted into Baltimore Infirmary Apr. 20th. Father is dead; mother is a patient at this time with typhus fever. She has all the appearance of having been a healthy woman, though too low at this time to give any account of herself. [illegible] that she has had a severe pain in her back for a long time, while lying on her left side, or sitting in an erect position. Is now suffering with same pain: has cough, with the characteristic sputa of pneumonia: dullness on percussion over left lung, with a fine crepitant rale. Mouth dry; tongue dry, and coated

pulse 135, quick, and feeble; sputa
[illegible], and [illegible] 2 [illegible]. The
following treatment was ordered,
℞ Potas. Nitrat grs ij
Pulv. Opii gr i
Pulv. Opeae grs
Misce et ft in Pulv.
S— every two hours
℞ Port Wine ℥ss
S— every two hours
℞ Tinct [illegible] x
S— at bed time
Oil silk jacket to chest
21st [illegible] 1 [illegible] since
[illegible] 2 [illegible], yesterday; cough is much
better; sputa not so high colored.
Slept well last night; pulse 108 stronger.

and fever; then yesterday: respiration 42
and a great deal easier. Evening:
Patient is much better: has not so much
pain in chest: expressing a countenance
[illegible]
little coated: Cough is improving: Sputa
also; not so much colored, and less in
quantity; pulse 102; respiration 36. Urine
was reduced to due to ℥iv in twenty
[illegible]

22d Patient is much better: pulse 104, and
[illegible]: respiration 30, and not in the least
oppressed: All symptoms point to a
speedy convalescence

23d Patient did not sleep well last
night, the Dovers powder being omitted:
pulse 100 softer than yesterday; respiration

2 and easy. The powder given on the 20th
was ordered to be stopped, and the following
given. ℞ Tinc Cincho Comp. ℥j
S three times a day.
Dovers powder not to be given, unless
wanted. Evening. Patients general condition
much improved; is not suffering with
any pronounced pulm complaint; pulse
102; soft; respiration 28, and easy.
25th Patient is better this morning; dullness
has cleared up; almost entirely; pulse
[illegible], soft, and compressible; respiration
24, [illegible] easy. [illegible]
[illegible] Evening. [illegible] improved.
Though a little drowsy; cough has
[illegible] left her, and no expectoration
[illegible]; pulse 86; respiration 22.

27th Patient better seems quite [illegible]

[illegible] times [illegible]. [illegible]

before stated ordered to be stopped, and

the [illegible] given ℞ [illegible]

S—three times a day

℞ Oleum Morrhuae ℥i

S—three times a day

Pulse 90, and very firm: respiration 20.

Evening. Patient [illegible]

sitting up the greater part of the day:

has no trouble in taking long breaths:

[illegible]

[illegible] etc.

Morning 10th Patient is up, and walking about

the room: was to day pronounced convalescent

[illegible] stopped and.

[illegible]

Case 3d Willis Spence, born in this city, by occupation a hotel servant; was admitted into the Bellevue Infirmary Apr 10th. Æt thirty years of age: parents are both dead: father died of a [illegible] disease of chest attended with pain: [illegible] always was a healthy man: does not know with what disease she died. Has lived in a malarious part of the city, and frequently had intermittent fever; also had an attack similar to the present some time ago. Was taken sick on 8th inst with chill, followed by a high fever from which he never during the night. On the [illegible]

with sharp stabbing pain in left side,
which has continued to the present time.
Patient states she is otherwise perfectly
clear: has no pain: no sore throat: mouth
dry, tongue dry, and coated: has had
some cough: appetite not very good,
but digests food when taken: bowels regular
and passes urine freely: sputa tenacious
and somewhat tinged with blood. On
percussion dullness over left lung;
auscultation reveals the pathognomonic
crackle of pneumonia, with total
absence of vesicular murmur: pulse
104, full rapid, and quick: respiration 30,
and hurried: Diagnosis pneumonia. The
following treatment was ordered, by the
attending physician, Dr Donaldson

℞ Potass Nitrat

Spts Æther Nitrat

Syrup Squillæ aa ℥j

Aqua ℥vij

S teaspoonful as often as required.

℞ Tinc Gentian Comp ℥ij

S 1 teaspn each meal.

Blist applied to lower lobe of left lung.

Bind to left side of chest with flannel

to chest. Evening, Patient seems easier,

pulse 108: respiration 32.

12th Patient slept well last night &

morning. Pulse 92 strong & little fuller.

Cough about the same: On percussion a

dull sound over lower lobe left lung;

also over right lung anteriorly, and

dullness not so marked posteriorly.

pulse 100, [illegible] the [illegible]: respiration
36, and somewhat oppressed. Evening.
Patient says he feels much better.
Complains of thirst; which is drawing very
painful. Chest not expanded fully; but
abdomen muscles relaxed, the
deficiency: Cough better: sputa [illegible]
neither so tenacious nor deep colored: pulse
75: respiration 36.
13th Patient is [illegible] this morning, owing
no doubt to taking cold: slept well
last night, having had an anodyne at
bed time: pulse low: respiration [illegible]
and very much oppressed: sputa
[illegible] tinctura opii was ordered to be given
every three hours, and the cough mixture
continued without the syrup of squills.

Evening. Patient's general condition not materially changed; pulse 130 respiration 36; some little easier.

14th Patient's condition about the same; did not sleep much last night. Black moist tongue red and its edges fissured. effusion into pleura less; but the extreme absence of vesicular murmur noticed on the 10th. pulse 100, firm and resistant; respiration 40. Evening. Patient seems to have more trouble in breathing; has a constant tendency to cough, which he tries to prevent. Skin seems moist, and he appears to be perspiring about the chest and neck. Sputa not so much in quantity, but so deep colored; more of a

muco purulent character: pulse 11[illegible] quite
and rapid: respiration 44, and very much
hurried: still dullness on percussion.
16th. Patient is much better, slept well
last night: cough little: expectoration
of [illegible] little: sputa [illegible];
dullness on percussion, has cleared up to
a considerable extent: weak bronchial
respiration is heard near angle of
scapulae: vesicular respiration is heard in
front: a little fine crepitant râle
at end of inspiration still exists:
pulse 80, soft, and not in the least
[illegible]: respiration 20, and not at all
[illegible]. Evening: Patient is improving
rapidly: Cough has entirely ceased:
tongue moist, though a little coated

In Central Patient was to day pronounced
convalescent, and off the sick list;
ordered to be stuffed nourishing
diet given. Flaxseed tea recommended,
as [illegible] the best [illegible].
17 Patient is able to sit up in bed
a day, and converses without any
inconvenience.
18 Patient is up [illegible]
room; will leave the Infirmary this
evening. It will be noticed that
the patient's pulse fell 30 beats,
and the respirations 28 times, to the
minute, in 36 hours; while giving
sufficient stimulant to produce
intoxication in a healthy man.

Case 4th. James S., aet. 20, admitted into the Bellevue Infirmary, May 1st. 20 years old by occupation a stereotype operator was taken sick on the 5th. inst. with general drowsiness, was well and hearty up to that time has not been able to attend to business since went to bed on the 7th and on 9th sent for a physician who gave him some purgative medicines & kept him on the seat since then bowels have been loose stools watery. Has now no symptoms of any disease of the heart has an eruption over his body, which came out on Sunday, first on face, then over whole body, is somewhat raised, and disappears on pressure

has gurgling in right iliac region;
eyes are injected: skin hot, and
dry: abdomen tympanitic distended
expression of countenance vacant.
Diagnosis typhoid fever. The following
treatment was ordered:

℞ Spts Frumenti ℥ss.
S- every four hours
℞ Acid hydrochloric gtt x
S— every four hours alternating
with Spts Frumenti.

17th Patient is much the same still
continues: nose colored. Spots are
increasing in number: skin very hot,
and dry; tongue is still coated:
pulse 96. The treatment of yesterday
was ordered to be stopped and

the following given.

℞ Ammonia Carb. gr XX

S [illegible] to h.

℞ Spts Vini Gallici ℥ss

S— every two hours, alternating with Ammonia Carb. Evening. Patient is sense little better; pulse 94, and very feeble.

18th Patient is improving; the restless spots are diminishing; expression of countenance [illegible] better; nevertheless he is that [illegible]: pulse 86, quick, and weak.

Evening. Pat. [illegible] pulse 90, skin hot, and dry.

19th Pat. [illegible] spots [illegible], although [illegible] is [illegible] but [illegible] stupid look: has considerable gurgling in

Right Iliac region: extreme tender-
ness on pressure [illegible]: pulse 110.
Skin dry, and hot.

20th Patient has changed very little
since yesterday: did not sleep in
last night; is very stupid, and
answers questions rather delirously:
pulse 112: skin dry, and hot.

21st Patient is some better to day:
has not the tenderness on pressure that
he had yesterday: skin not so dry
and hot: pulse 110 fuller, and
stronger.

22nd Patient is better, but exceedingly weak.
Is delirious: consciousness of what is going on
does not appear [illegible]: pulse 98, strength about the same, as

yesterday; rose colored spots have [illegible]
left trunk; abdomen suffer, and not [illegible]
bad [illegible] forced.

24th. Patient is still improving; pulse
84, and weak. The Ammonia bark was
ordered to be stopped

26th. Patient is better, but still stupid.
Skin is moist; tongue moist, and
clean.

28th Patient better; bowels still be stopped,
and the following given

℞ Ext. Columbo
Ext. Cascarillæ aa ℥i
Aqua Coleis ℥ IV.
S— Teaspoonful before each meal.

30th. Patient was to day pronounced convalescent
still be kept stopped, on a good diet given.

Case 6th Charles Pager. Admitted into the [illegible] Sept 1. [illegible] twenty seven years of age, by occupation a sailor, and a native of this city. He states that his parents are both living, have always been healthy, and to the best of his knowledge, has [illegible] venereal relations with any [illegible] In regard to his [illegible] always been healthy [illegible] with the exception of a few days sickness about three years ago. He does not know what it is to have been sick, [illegible] for [illegible] years. He [illegible] with pain in head and limbs has [illegible] though not in the least colored,

lowness low, and furred; skin dry, & hot; pulse 140, quick, and weak; respiration 60, [illegible] [illegible] [illegible] [illegible] examination reveals, on percussion dullness over lower lobes of both lungs; on auscultation a fine crepitant rale over middle lobes of same. The following treatment was ordered.

Apts bini Salicis ½ as every three hours. Oil silk jacket to chest; and, as nourishment, beef tea and milk ad libitum.

8th Patient is in about the same condition as yesterday. No material change has taken place; crepitant rale heard more distinctly, and extreme absence of vesicular murmur over lower

bubbles of both lungs. Evening Patient is not so well as he was this morning. expression of Countenance more anxious. pulse the same being 140 and respiration 60. Dovers powder gr X was ordered for him at bed time.

9th Patient is much better this morning pulse 8 x and full respiration 32 and apparently easy. other symptoms as at the same. Evening Patient is worse this evening having a return of fever pulse 130 quick and exceedingly weak. respiration 38 and hurried.

10th Patient is some better this morning having slept well the latter part of last night. pulse 102. respiration 34: expression of Countenance more calm.

[illegible] patient is worse: had a slight-
[illegible] 5i/20 [illegible] bleeding at the [illegible]
pulse 120 and weak respiration 48;
although apparently easy. In addition
to [illegible] Liquor Sulphas ℥ss
three times a day, was ordered.
11th Patient was worse last night - being
quite delirious. Consequently did not
get any sleep. Is better this morning
mind perfectly clear - tongue moist, but coated
brown coat, and feather moist, particularly
hands and face: pulse 92, better than
yesterday; respiration 24, and not so
labored [illegible]; the crepitant-râle spoken
of [illegible] 8th still [illegible] its. but not so
marked: can distinguish a slight
[illegible] : although not very audible:

Evening Patient worse than this morning. pulse 80: respiration 27. Skin hot: tongue dry: little weaker than it was this morning.

13th Patient still improving. Sibilant murmur ceasing to be heard. Skin moist and cool. tongue moist: pulse 64: respiration 20: expression of countenance better. Evening. Patient seems quite easy does not complain of any pain: pulse 60. and full. respiration 20. The spts vini Gallici was ordered to be stopped, and light but nourishing food given instead.

14th Patient's general condition much improved. appetite good and [illegible] food [illegible]

15th Patient is much better this time.
Can sit up in bed without an
inconvenience. Every thing points to
a speedy recovery. The Jamine
was ordered to be stopped.
16th Patient better, and is able to
get up, and dress himself.
Was to day pronounced convalescent.

AN

Inaugural Dissertation

ON

Acute Inflammation,

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Francis X. McLaughlin.

Of

Virginia.

Session of 1866-7.

Acute Inflammation.

I cannot more appropriately enter upon the investigation of the causes and effects of Inflammation, that subtle enemy of the physical system of man, than by a definition of the radix of the term itself.

The term inflammation is derived from the latin inflammo (to burn), so called on account of the burning pain felt in the part affected.

Inflammation is a complex, morbid process, in which while a portion of the vessels of the part inflamed are in the condition of active Hyperæmia another portion exhibits the characteristics of a peculiar (inflammatory) conjestion, marked by stagnation and coalescence of the corpuscles with exuda-

tion of serum and lymph.
This peculiar morbid condition is one of the utmost importance to every surgeon and physician; because there are but few diseases of a serious character which run their course without the occurrence of inflammation at some period of their progress. Hence the necessity for a most careful investigation and thorough acquaintance with its phenomena, its diversified products, and the relation of its various processes to each other.

Acute inflammation is that variety which is violent in its attack, and rapid in its course, and may be defined a pathological condition characterized by unusual redness, heat, pain, tumefaction, and change or arrest of the functions

of the organs or part affected. We may have, however, an occurrence of one, or more, of the symptoms, without the presence of inflammation; nor is the absence of one or more of them incompatible with its existence.

I will not enter into a detailed consideration of the numerous and diversified causes producing inflammation, but shall notice them briefly, and proceed to examine its various phenomena, products &c.

The causes may be divided into predisposing and exciting; of the former, we see examples in those whose vascular systems are irregular, as the result of original conformation, or induced by previous disease — those who have been subjected to fatigue, confinement, impure

air &c. Of the latter, we have mechanical, chemical, and vital irritants; also, those producing congestion — as cold, malaria, suppression of natural or habitual discharges &c.

The phenomena observed in the process of inflammation, are curious and interesting. Place, for example, an irritant, as a drop of nitric acid on a living tissue, and observe the effect — the first change that is perceived is a contraction of the vessels, momentary and spasmodic, as it were, retarding the flow of blood to the part. This contraction is speedily followed by dilatation and increased flow of blood. The seat of the primary part of the process of inflammation, is thought to be in the nerves of the part, but to

this conclusion Pathologist have not fully arrived. And as this may be true of irritating causes, many authorities do not regard the nerves as its essential seat; because many of the agencies producing internal inflammation, seem to produce their effects without any marked implication of the nerves. I am of opinion, that so far as is at present known, the blood vessels and their contents are the essential seat of the whole process of inflammation; and though irritating causes, as above stated, act on the nerves also, yet others, as cold, operate chiefly on the blood vessels and contents only. Hence, we find that causes predisposing to inflammation, are circumstances interfering with the action of

the vascular system.
I will next notice the changes produced on the vessels and contents, and the attending phenomena. The vessels are enlarged, as may be observed from the redness with the naked eye. Enlargement may also be seen in congestion, but there are other symptoms which are not observed in congestion. We have greater heat and pain, abundant effusions, a florid redness, instead of lividity, as in congestion, violent pulsation of the arteries, increased motion of the blood, and lastly, the various products which are quite sufficient to satisfy us that we have inflammation.
The causes of, or conditions necessary to, the production of this enlargement of the blood

vessels, requires further research. The most plausible theory, however, and the one most generally adopted, is, that the tonicity or irritability of the structures of their walls is impaired, perhaps by the previous excessive stimulation.

Another interesting phenomenon of inflammation is the fact that the flow of the blood is partly increased, and, at the same time, partly diminished. The former condition is seen in the rapid passage of the blood through the arteries; the latter in the stagnation in other obstructed vessels in the part.

Many hypothesis have been framed for the purpose of solving the difficulty which exists in regard to understanding the cause of this obstruction. As far as

has been ascertained, it would seem to be due to the increased production of the colorless corpuscles of the blood, and their adhesion to the walls of the vessels, and to each other; to the increased mass of blood in the minute vessels, and to the diminished "contractilité de tissue" of their coats. The blood, also, undergoes important changes. We find the fibrine and white corpuscles greatly increased in this affection. I think the latter, especially, are more in excess, probably, than the fibrine. Now, in estimating the quantity of the latter, the white corpuscles are not taken into the account. They have never yet been separated from ~~from~~ the fibrine of the human blood; their

composition is unknown, but in the estimate of fibrine, we have their weight included. Now, it is evident, that the white corpuscles are increased, and I think it very probable that a portion of the supposed increase of fibrine may be due to their being weighed with it. Having noticed the effects of the inflammatory process on the blood vessels and their contents, I will now consider, seperately, the symptoms to which we before alluded. The symptoms are divided into local and constitutional. The local occur in the part which is inflamed; the constitutional affect the whole system. The local are, redness, heat, pain, tumefaction, and change in the function of the organ or part.

The redness of an inflamed part, I think to be due chiefly to the increase in the quantity of the blood in its vessels, the vessels as before stated are distended, the finest capillaries, which in a normal state are invisible, are now distinctly seen, dilated and filled with red blood. The proportional increase in red corpuscles, by the exudation of serum, may assist in some degree. Some observers have conceived that new blood vessels are formed by the blood as it forces its way through the tissues. This notion I think erroneous.

The heat of inflammation depends greatly, perhaps solely, on the increased flow of blood through the part. This is evi-

dent from the fact that in proportion to the violence of the inflammation is the heat increased. I do not believe in flammation, as supposed by some, a calorific process by any means, for many experiments have been instituted to determine this point, and in no instance was the temperature found above that of the ~~tem~~ interior of the body.

Tumefaction may partly be produced by the enlargement of the blood vessels in an inflamed part, but the main agency is the effusion from the distended vessels. The form and degree of the swelling will depend much on the natural structure of the part involved. In the mammary gland, the scrotum or any of those loose cellular structures,

the swelling is often extreme, while in parts composed of dense fibrous tissue, but little exists.

The principal cause of pain, is the pressure on the minute nervous branches by the turgid blood vessels: in some degree also, perhaps, by the exalted sensibility of the nerves, which is produced by determination of blood

Inflammation is attended ~~with~~ ~~certain~~ with constitutional symptoms the severity of which will be proportional to the intensity of the inflammation, the amount of local irritation, and the vital importance of the organ involved. The constitutional disturbance in inflammation assumes the form of fever. This is called in-

flammatory, symptomatic or surgical fever. It presents a great variety of forms, the principal of which are called sthenic or typical, asthenic or typhoid, and irritative or nervous.

Inflammation has two true terminations, resolution and metastasis. When it terminates by resolution, we find the effusions removed by absorption, the obstruction which existed in the blood vessels yields, and the part is restored to its normal condition.

By metastasis is meant a change in the seat of the affection, its sudden disappearance in one part and appearance in another. This rarely occurs. Besides the true terminations of inflammation, we have it

passing from its primary condition to other forms of the disease. Thus, where we have effusion of lymph, it is called adhesive; the production of pus, ~~suppu~~ is called suppurative, formation of an ulcer, ulcerative; death of the part gangrenous.

At an early period in the process of inflammation, the turgid blood vessels, in the attempt to relieve themselves, throw out an abundance of serum, resembling that resulting from congestion, except that it contains a little more animal matter. This is followed by the effusion of fibrine, called also lymph, plasma and coagulable lymph, giving to the swelling a degree of hardness as may be seen in boils,

thickened mucous membranes, &c.
Of this effused lymph there are two varieties; called plastic and aplastic, or corpuscular. The plastic is the true coagulable lymph, and plays an important part in the reparation of injuries, and rebuilding destroyed tissue. It is met with in the healthy and vigorous. The aplastic or corpuscular, possesses no power of coagulating, but consists chiefly of what are called exudative corpuscles, freely floating in a serous fluid, and is found in cachetic and scrofulous constitutions.
We now approach the suppurative form of inflammation, which is attended with many interesting phenomena. It is characterized by the production of pus. This, when it results from

active inflammation, in a healthy subject, is an opaque, creamy, thick fluid, of a yellowish green color, has a slight faint odor, and a alkaline reaction. This is called laudable or healthy pus, and consists essentially of pus-cells, resembling in some degree, the white corpuscles of the blood. There are several other varieties, the sanious or bloody, the curdy or cheese-like, and the muco-pus and sero-pus.

Pus is, I think, a true product of inflammation, and not the disintegration of the solid tissues, as was thought by the older surgeons.

That form of inflammation which results in the formation of an ulcer, is called ulcerative. The changes produced in the tissues by this process, are not

yet clearly understood, but there is no doubt that they consists essentially of the molecular death of the tissues, and the detachment of the dead matter, by a peculiar action of the adjacent living structures.

Lastly, gangrene or sloughing may occur from the intensity of the inflammation. And this may take place, even if the part be sound and the patients general health unimpaired.

Most usually, however, it is where there is debility, local or general, by which the vital power is reduced.

Treatment. The treatment may be divided in local and general and constitutional.

In the local treatment, if the inflammation be external, as for instance, that resulting

from a wound, the first indication is remove all sources of irritation, and as rather a preventative agent, we apply cold ~~opa~~ evaporating lotions. If the tendency to inflammation be great, the application of cold by irrigation, is very beneficial. These are the means usually had recourse to in the earliest stages.

When inflammation has actually commenced, the abstraction of the blood locally, by cups or leeches, is found of great benefit. Of course, as the disease progresses, the treatment may be modified, and the surgeon must be guided by the condition of the patient, and the state of the inflamed part.

Constitutional treatment. If the inflammation be but slight, a mild aperient will perhaps fill every indication. But should the sthenic variety present itself, and the patient be strong and plethoric, we must have recourse to bold and energetic measures. Bloodletting is the most potent and beneficial remedy we can use. And in the abstraction of blood, we should exercise some precaution with regard to the position of the patient. He should be placed in a sitting, or better still a standing posture, and be bled from a large orifice, in order to produce the greatest impression on the system, with the least loss of blood. Cathartics are

of very great service. One of the best of these, if not the best, is mercury, or some one of its preparations. Opium is an excellent remedy in this form of symptomatic fever. It exercises a soothing effect upon the nervous system, and also modifies, to some degree, the heart's action. An excellent mode of administering it, is in combination with some one of the mercurials, as calomel. In the treatment of the asthenic or typhoid variety, we direct our remedies especially to the support of the patients strenght. A gentle laxative may be given to move the bowels, then tonics and stimulants, constitute our most reliable remedies; brandy, wine, ammonia, &c.

In the irritative, the tendency is to great nervous disturbance, sometimes to wild raving delirium, followed by extreme exhaustion, and unless relief is had, speedy insensibility and death. Here, we must use anodynes to relieve the violent nervous symptoms, and stimulants to support life's failing powers.

Francis X. McLaughlin

AN

Inaugural Dissertation

ON

Pneumonia

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

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OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Young A. Bond

of

Maryland

Session of 1867.

Pneumonia.

I have been induced to consider this subject, for two reasons. The first, is, that modern observers have been so assiduous and accurate in their observations as to divest it of all that is obscure or perplexing; thus placing a limit to idle and delusive speculations, which often particularly enticing to medical writers. The second, is, that it involves a question of vital importance to the good of mankind to be determined, One that requires a first, prompt, and accurate decision. A question that agitates the greatest minds of the profession at the present day. I have reference to the theory of

drawing blood in the treatment of this disease. To the end that we may arrive at a correct conclusion concerning the merits of such a course of treatment, it is incumbent upon us, to clear our minds of all that would have a tendency to find or misguide us in coming to a correct conclusion from the facts offered, and not to distort our observations, or frame our facts to suit a foregone conclusion; a fault so common and so hurtful to our profession.

Pneumonia is an inflammation of the parenchyma of the lung, that is of the lung substance,

There are many kinds of Pneumonia expressive of its site. Thus Lobular a condition in which the inflammation is restricted to the lobules. again we have chronic opposed to acute, &c &c. These each deserve the attention of a special treatise. I will therefore limit myself to the consideration of Acute Lobar Pneumonia.

Morbid Characters.

There are three stages of the disease, known as Engorgement, Hepatization and Resolution or Suppuration, named severally from the morbid conditions denoted by them.

Engorgement is simple an active congestion of the lung and differs

in no respect from congestion of other parts, the lung presents a black appearance, and when cut a large amount of blood and serum are poured out, the air still enters the vesicles, but their caliber is much lessened in consequence of congestion, the next stage to this is, Hepatization or Resolution, usually the former, the lung is rendered solid by coagulation of the effusion into the vesicles, thus preventing the ingress of air, consequently a piece of lung in this condition will not float when thrown in water, One of the distinguishing features between this stage and the last, Dr Flint

says that the lung is "white and anaemic" in this condition, and that red hepatization is a misnomer, this is an observation peculiar to Chinese. The lung is more friable than in health, and when cut a variable amount of serum can be expressed, the cut surface looking granular from the presence of lymph in the vesicles. There is an increase in volume and weight proportionate to the exudation. It has been estimated that a single lobe may be increased in weight from one to two pounds. Resolution may be a sequence of either of the preceding stages. It is the process of recovery, or

return of the lung to its normal function, The Exuded lymph is absorbed and carried into the circulation, Bennett believes that pus is first formed then absorbed and excreted from the system, this explanation is of course at variance with the doctrine of modern physiologists; considering their estimate of the diameters of pus globules, however, let the process be what it may the result is the same, The foreign matter is removed and the structure of the lung thereby restored normal, with a resume of healthy function,

Suppuration, If in place of resolution which usually follows hepatization

suppuration supervenes, the tendency is very unfavorable. The affected tissues become infiltrated with pus, are soft and easily broken down, when cut more or less pus pours out. The tissue is grayish in appearance. These are the common results of inflammation of the lungs, but like all other parts of the body it is subject to any or all the results of inflammation.

The morbid characters may be increased or altered by complications.

Pleurisy limited to that part of the pleural surface in contact with the inflamed lung, is most always present. It may take on any grade;

though it is generally circumscribed and attended with little or no exudation. Exudation is more common, and is limited or extensive according to the extent of the pleurisy. When the diseases are thus associated and the pleurisy preponderates in severity, it is written Pleuro. Pneumonia. Bronchitis also usually coexists with this disease, not that there is any reciprocal relation as was formerly supposed, but probably from the existence of a common cause, they are coincident not consecutive the one to the other; like pleurisy it is very variable in degree.

The inflammation seems to exercise

a peculiar preference for the lower lobes, next the middle and lastly the upper lobe, especially when tuberculosis exists, and in consequence of which inflammations of that part of the lung are rendered very dangerous.
This represents the order in which the lobes may be affected, but in some rare cases the whole of one lung is inspissated at once, or the part of both constitutes double pneumonia.
In lobar pneumonia the inflammation commonly arises from one or more lobules and extends itself to the whole lobe through contiguous parts and where more than one lobe is

involved, it is usually by extension from the primary seat of attack, thus often causing the three stages to exists simultaneously.
The diffusion of the disease may be very special, or occupy one or two days. Exudation when it occurs quickly ensues upon engorgement.
Having now considered the morbid characters of the disease, we will next treat of the means by which we determine its existence.
Symptoms. The symptoms and physical signs are embraced in three divisions corresponding to the stages, and are the expressions of the morbid conditions assigned to those

stages, Symptoms of the first stage.
The disease is introduced very abruptly, there are no morbid sensations preceding as in many other diseases.
The patient is usually first seized with a rigor, which may be either very slight or somewhat protracted, succeeding to this is considerable fever with a pulse generally full and hard, ranging from 80 to 120; also heat of surface, thirst, anorexia, dyspnoea with more or less increase in respiration, and often some headdisturbance; Coincident with all these symptoms, a lancinating pain in the side is complained of, which is trivial or more marked.

as may be, its mildness or intensity is usually considered a measure of the pleural complication. It is aggravated on pressure or motion, hence the partial suppression of the respiratory movements, which calls for an increase in the frequency of the act, in order that the blood may be duly oxygenated. Cough is most always present, and the pain occasioned by it commensurate to the severity of the pleurisy.

The sputa is first scanty, translucent and tenacious, usually but not always. It soon assumes a rust colored appearance and is then known as the rust colored sputa

of pneumonia, and is reckoned pathognomonic of the disease.
It is semi-transparent and very adhesive, clings tenaceously to the walls of the vessel when everted; it is the product of the admixture of blood and mucous, sometimes the reddish tint is wanting, while it possesses all the other properties.
It may be absent in some cases when only a small part of the lung is involved. Commencing with chill differing essentially from the symptoms of the first stage are those of the second. The fever still continues, but with less intensity, cough and expectoration are present.

the cough occasionally little or no pain and the expectorated matter freely thrown off. the sputa changes from the rust colored to an opaque and less viscid condition, also more abundant, coming chiefly from the bronchial tubes & the affected lobes.

Symptoms of the third stage.

The approach of the disease to this stage is an eventful period, we either visit a joyous and exulting home or we come to the cheerless realm of sorrow and death, or what soon will be; This stage may be either of two conditions, Resolution or Suppuration,

we will first notice the events of the former of these terminations. When the disease has reached its acme, it assumes the former of the two conditions. the febrile movement becomes less, the appetite is restored, respiration becomes natural, cough and dyspnoea diminish. in a word the restorative process is general. If suppuration occur, the pulse becomes very frequent and small, indicating great debility, purulent matter is freely expectorated and there is great increase in the respiratory effort. death by asphyxia soon closes the dismal scene and releases

the surface from the farewell throes of Earth, The symptoms of pneumonia taken collectively point strongly to the disease, but supposing some of the more important to be absent, we would not be able with any degree of certainty to make out the disease, hence the necessity for Physical signs.

Their value, lies merely in the knowledge that certain sounds obtained from the thorax, hold a reciprocal relation to peculiar conditions of the lung,

First Stage — Auscultation aids us principally or almost wholly in deciding that the lung is engorged

Percussion revealing comparatively nothing. In this stage we have rude or harsh respiration, from the presence of thin liquid in the vesicles, according to Dr. Gerhard though I am rather inclined to refer it to the results of inflammation believing it to be caused by the passage of air over the uneven and unpolished surface of the air vesicles and smaller bronchiac tubes, we have also crepitant rhonchus which is considered pathognomonic of the disease. It resembles the sound produced by throwing on fire, substances containing water of crystalization, such as salt &c.

As to how this sound is produced writers are not agreed. Some consider it to be occasioned by the bursting of air bubbles formed in the ramifications of the smaller bronchial tubes and vesicles. Dr. Watson favors this view, others refer it to the tearing asunder by the ingress of air, of adhesions formed between the two coats of the vesicles by viscid secretions. In the absence of proof to decide the worth of either of these theories, I am inclined to believe the latter more probable.

This sound may recede into the vesicular sound of health or give place to Bronchial respiration.

Signs of the second Stage.
On applying the ear to the chest we hear a whiffing or blowing sound which originates in the bronchial tubes, therefore called Bronchial respiration. It is a healthy sound but only heard under the favorable condition offered by solidification, the vesicular sound being absent and the walls of the tubes condensed. This sound is clear or obscure according as solidification is restricted or extensive. It is most audible when the upper and middle lobes are involved, where the larger bronchial tubes are. When the lower part of the lower lobe

is solid it may not be heard at all. so when one or two lobules are hepatized it may be wanting also. Associated with this sound we have bronchophany, which is the voice resounding through the solid lung and chest walls. By percussion we have dullness or flatness, which is indicative of commencing and perfect solidification. We have positive evidence of solidification when there is flatness and total absence of sound.

Signs of Resolution.

The signs of this stage are those of the forming stage in

an inverted order, in place of bronchial respiration we have fine crepitation, which soon becomes vesicular and renders the bronchial respiration inaudible suspiration, There are no physical signs by which we can judge absolutely of the existence of this stage, We are assisted to some extent if a vomica is formed which gives rise to a gurgling sound, notwithstanding we do not hesitate from the evidence furnished by the symptoms, to decide when this stage exists, Thus while we could not with surety from

any one symptom or sign declare the presence of Pneumonia, we can if we regard the symptoms and signs respectively as letters, spell out with more than common accuracy the existence of the disease, (if the letters be properly arranged).

Very often there is central pneumonia and none of the signs are clearly indicative of it. Sometimes the inflammation is seated close to the surface of the lung and we have puerile respiration, which results from the enlargement of adjacent vesicles

Causes - The causes of this disease are generally regarded as conjectural, though in my mind there is but little doubt that it is usually due to invaid congestion. The circumstances under which it commonly occurs are so common to the disease as to enable one to say with very little liabelity to Error, that it is traceable in a very large majority of cases to the Effects of cold and moisture. Else why is the disease confined to such an extent to the winter season?. Again it's occuring in connection with intermittent fever in such a

marked number of cases, would justify us to some measure in attributing it to congestion. Again patients in the majority of cases are conscious of experiencing chilly sensations, from some change, at no very long time preceding the attack, or having been imprudent in exposing themselves. It so often follows upon debauches and over-stimulation, when the powers of evolving heat are impaired that we are forced to acknowledge the connection. However apart from this cause cases do occur which we are not able to refer to any vicissitudes or changes of weather

therefore we must believe that there is an inward and inexplicable tendency to the disease which may be encouraged to development under certain favorable conditions. No period affords immunity from or a noted tendency to the disease. It is less common with females than males from the fact that they are given to indoor pursuits, moisture combined with cold much enhances its power to produce the disease. It may be produced traumatically, as by blows upon the chest, or acid inhalations.

Diagnosis— The symptoms in

many cases are peculiarly characteristic of the disease. We could say with much surety that a patient had pneumonia if seized with a chill, followed by fever and a lancinating pain in the side, expectorating the rust colored sputa with considerable dyspnoea and increased respiration, also a circumscribed flush of the cheek hectic being excluded, distension of the alae of the nostrils. These symptoms taken collectively are pathognomonic of the the disease, but as before said some of them are wanting or obscure, and

other indications for forming a diagnosis are needed. Even though we should be able from the symptoms to determine the presence or absence of the disease, we could not decide positively whether it was advancing or receding, what then is needed that we may know of these important alterations or changes? Physical signs which have been sufficiently spoken of in treating of the several stages, therefore I will not recapitulate them. It may be distinguished from bronchitis in its forming stage, by the difference in the rales, the one being crepitant

the other sub-crepitant, which is a "moist bubbling sound". The former an inspiratory the latter either an inspiratory or expiratory sound - The signs of Pleurisy are confined sufficiently close to that disease, to prevent its being confounded with Pneumonia! for instance the changeable seat of flatness, varying with the position of the body, whereas in this disease the line of distinction between solidified and sound lung can be well drawn under all circumstances or positions. Phthisis cannot be confounded with this disease. It is by some

believed to afford immunity to pneumonia, though I am rather incredulous of any connection.
In Emphysema, on percussion we have induce resonance, which enables us to distinguish these diseases easily, dyspnoea is common to both of them, Asthma and organic affections of the heart are also supposed to afford some immunity to this disease.
Prognosis— The prognosis in an uncomplicated case is generally favorable, the tendency being in this as in most other diseases to recovery, death very rarely occurs from the disease if it say, in some rare

cases, It quickly follows from very rapid and extensive interference with hæmatosis, but "ut supra" they are exceedingly uncommon. The prognosis will be more or less favorable according as the complication is mild or grave. In malarious districts of country, intermittent fever is most always a concomitant and a happy termination of the disease may be looked for, unless blood-letting be resorted to. Occurring in the course of an attack of any of the continued fevers, or of measles and the like, the fatality will be proportionate to the severity of the complication, and in accordance

with its grade or type, apart from pneumonia.

Happening in connection with pericarditis or pleurisy with extensive inundation, or both the prognosis will be very doubtful, equally so in cases where there is an organic affection of the heart.

Dr H. Lindt supposes many deaths to be due to the formation of fibrinous coagulum in the right cavities of the heart, he says that the conditions favorable to its production are extensive solidification, as where a whole lung is hepatized at once; or in double pneumonia,

Its occurrence may be inferred when there is a sudden change for the worst in the patients condition, not warranted by any extension of the inflammation, nor supposed to depend upon any super-added disease. The pulse becomes very frequent, small, and irregular; respiration much embarrassed; the expression haggard and anxious; and perhaps an abnormal heart sound. This complication is surely fatal. I suppose it is more likely to occur where valvular lesions preexisted, the concretions upon the valves serving as a

nucleus for further deposits. If suppuration follows upon hepatization, we anticipate an unhappy result, though the case will not necessarily end fatally. The formation of an abscess is attended with much danger, and if gangrene results the tendency is most always to a fatal termination.

In an uncomplicated case the danger is to be estimated by the extent of the inflammation, when the disease ends in death it is generally by asthenia, and the typhoid condition usually strongly developed. The duration of the

disease is from nine to twenty one days, but liable to great variations.

Treatment—

We come now to consider the object & all our study and investigation. How to treat of this part of the subject is extremely perplexing, for my experience is so limited, that were I to advance any mode of treatment dogmatically, I could very justly be said to be immodest and full of my own vain but empty self. Again the thought struck me that I should recount the several modes of treatment that have been followed, but were I to do this it would require a

volume to contain the day detail is
defeated in this, I have been
induced to compare the treatment
adopted by more modern authors
and deduce therefrom what seems
to me rational and proper.
The results of the different courses
of treatment, I must say, have had
a determining influence upon
me, I more fully endorse or accept
that followed by Bennett than
any that has been given to the
public yet, since his statistics
show a greater number of recoveries
from it. Bloodletting I don't think
to be of advantage as an anti-
phlogistic in the least. Though

I am unwilling to discard its use wholly, for I think in certain conditions of the disease its good effects are obvious, as a palliative. I do not favor copious depletion by the lancet, because it has a depletive effect upon the blood, diminishes its red corpuscles, and increases the amount of fibrin: a condition that is to be studiously avoided, since the mode of death is usually by asthenia. And as the powers of life are already lowered by disease, such a course would seem like adding fuel to a fire to quench it. Thus we see that it reduces the powers

of the system and renders it unable to cope with the disease. There is a condition, when blood-letting would be highly advantageous: when the lung is extensively hepatized and the quantity of blood excessive, considering the impaired function of haematosis then would bleeding from a vein be of much service by reducing the quantity of blood sent to the right cavities of the heart. We can judge of this condition by labored and irregular action of the heart with a strong impulse, while the radial pulse is small, or not so

full as the forcible action of the heart would justify.
In the beginning of the disease if nothing contraindicated I would give a saline cathartic with the double view of clearing out the alimentary canal and diminishing the viscidity of the blood. I would give as much beef tea and other simple but nutritive food as the patient could digest with a plentiful supply of water to diminish the heat of body & favor the removal of excreta from the system such as the urates &c. Also to accomplish this end, I would administer

diuretics occasionally,
Elimination would be the source
from which I would expect most
good, and I would be guided
by the condition of the pulse in
their use. If the pulse was small
very frequent & feeble I would
think them strongly indicated,
If any restlessness and insuper
good sleep I would give opiates,
such as Dover's powders, any
complications would require
variation.
Cupping on the seat of inflam-
mation is highly useful. It
allays pain, [illegible]
[illegible], stimulating Evacuations

are also much lauded, hot fomentations and the like. Often a blister will be very prompt of good. It would be an endless labor, or indication, to attempt to give the treatment for every indication that might offer in any in this disease, so I will simply say that my course would be expectant.

G. H. Bond

An Inaugural Dissertation

on

Diphtheria

Submitted to the Examination

of the

Provost Regents & Faculty of Physic

of the

University of Maryland

For the Degree

of

Doctor of Medicine

by

Wardlaw McGill

of

Frederick Co Md

Session 1866 & 67

Diphtheria.

Of all the diseases which have lately come under the notice of the profession generally, none have attracted more attention than those classed under the head of diphtheritic. Nor is this to be wondered at, when we consider the terrible mortality and distressing nature of the symptoms, that often attend epidemics of this disease. Diphtheria is a synonym of the word Diphtheritic which is derived from the Latin word Diphthera (meaning the prepared skin of an animal) The word Diphtherite was first used by Dr. Bretonneau in a treatise on the subject which appeared in 1826, in which was given an account of

the epidemic of malignant sore throat, prevailing at Tours, and in its neighbourhood in 1818, and again in 1825 and 1826.

History. This affection can be traced back to a period almost contemporary with Homer. Whether this be true or not ten centuries later, distinct accounts of a form of malignant sore throat, may be found in the writings of Aretaeus, under the name of the Egyptian or Syrian ulcer. This prevailed in the two countries especially among children. Ulceration of the throat, fetid breath, and sometimes great dyspnoea were its chief symptoms. Advancing to times of a later date, we find accounts of epidemics of malignant sore throat occurring in Holland, Spain, and in various other parts of

the world. In England some of these epidemics proved very fatal especially one which occurred in 1748, which was described by Fothergill and which was beyond doubt closely allied to Scarlatina. There have also been various epidemics of malignant sore throat in France at different periods, many of them occurred in Paris in the hospitals there. In 1826 the treatise of M. Bretonneau appeared, and although he differs in several points from practitioners of the present day with regard to diphtheria, yet this may truly be considered the first connected and practical research upon the subject of this disease. With regard to our own country Dr Douglass of Boston first published an account of sore throat distemper as it

occurred in 1736. The epidemic he describes was one of great fatality &c. Of late years diphtheria has attracted much attention from the fact of its prevailing in an epidemic and very fatal form in this country, especially in California, accounts of which have been published by various practitioners of that State. It has occurred in other parts of the country at different times assuming a character of more or less violence, and has been described by various observers.

Symptoms. The disease begins with some redness of the fauces and a sense of uneasiness in the throat attends as in common angina, but usually in a less degree. This condition lasts but for a short time, before the exudation commences to appear.

Sometimes the disease sets in very gradually with feelings of depression and muscular debility, headache, nausea, slight diarrhoea, chilliness and drowsiness, while before the throat is actually sore a sense of stiffness in the neck is complained of. In an article written by Mr. Mr. Pantry and Rillet, diphtheria is described as follows. Diphtheria commonly sets in with slight febrile symptoms, the strength and appetite not being sensibly affected. The patient complains of slight pain in the throat, no change in deglutition. Very shortly after the first attack, a slight swelling of the tonsils is observed, and frequently a little exudation of false membrane. Soon whitish or yellowish white spots

are seen on the tonsils, which extend to the uvula, velum palati; when they often loose the white color and become of a dirty-gray, giving out an extremely fœtid odor; an abundance of saliva is at the same time running from the corners of the mouth. The glands of the neck gradually become enlarged. At the end of a certain time, according as the membrane is more or less adherent, it commences to separate and is thrown off. Or remaining adherent to the mucous surfaces it gradually grows thinner and then disappears. If the disease terminates favorably there only remains a slight redness about the throat. In fatal cases, the inflammation extends from the fauces to the air passages, thus giving rise to croup &c."

Dr. Copland in his Dictionary defines Diphtheria as follows - "Soreness, pain, and heat in the throat, often increases on deglutition; redness, with an exudation of a buffy or grey lymph in spots, at an early stage, commencing either in the fauces, on the tonsils, or pharynx, and quickly extending to these, and often also to the larynx and oesophagus; the exudation becoming more continuous and firm, accompanied with fever and appearing generally either epidemically or endemically." Judging from the various epidemics which have prevailed in different places, there seems to be two forms of this disease, a mild and a severe.
The mild is usually preceded by more or less fever, loss of appetite and dysphagia,

with some uneasiness about the fauces. The tongue presents a thick whitish coat. At the beginning of the affection the velum palati, uvula, and pharynx are of a bright red color. The tonsils are slightly swollen and of the same red hue. In a short time generally from twelve to thirty six hours after the attack, upon one, sometimes upon both tonsils, are seen distinct white patches of exudation of false membrane. These soon extend over the uvula and posterior walls of the pharynx. The exudation cannot be easily removed since it adheres more or less firmly to the adjacent mucous surface. In a few cases the exudation remains confined to the tonsils and neither grows black nor putrefies.

The mucous membrane around is swollen and projecting. The parotid and submaxillary glands are not much swollen. The duration of the mild form of the disease is from six to nine or ten days. In the severe form, the disease commences with intense headache, hot pungent skin, rapid feeble pulse. There is great dysphagia and the respiration is hurried. The tongue is covered with a thick, dirty brownish coat. On examination of the throat the tonsils are found immensely swollen and covered with a thick and colored membrane which has extended to the uvula and posterior walls of the pharynx, and sometimes gives out a fœtid odor. Unless relieved all the symptoms increase

in severity - the respiration becomes much oppressed, there is a barking cough, and a change in the voice, which becomes harsh and indistinct; the deglutition becomes so painful that children refuse to swallow even liquids; the saliva dribbles from the corners of the mouth and an acrid discharge flows from the nares. The glands of the neck are tender and swollen. The patient is at times extremely restless and tossing about, at other times sinking into a low comatose condition. These cases when they prove fatal terminate either from prostration of the vital powers or from extension of the diphtheritic membrane into the air passages. With regard to the exudation

when examined by the naked eye it has the appearance of a fibro-plastic membrane. It presents a whiter color when situated in the larynx, than in the fauces, it resembles very much the membrane thrown out in true croup, though it is softer and often seethed by the serious matter that exudes from beneath and around it." Dr Canner mentions two varieties of diphtheritic exudation, one of which is very tough and elastic and as much as the eighth of an inch in thickness, resembling wash leather; the other grey creamy and pulpy. The former consisting of such fibres as we see in the buffy coat of the blood coagula - the latter, pus pyoid corpuscles of Lebert, and others smaller and larger granular corpuscles, epithelium and oleo-proteïn corpuscles.

Dr Gairner teaches that these two forms of concretion are severally related, the latter with the asthenic, the former with the so called inflammatory type of the disease." Dr Tanner gives the following microscopical description of the exudation in his practice of medicine. "If the exudation is examined microscopically it will be found to consist of molecular particles, epithelium, pus cells, and blood corpuscles. Fibrillae are very rarely seen. The oidium albicans may occasionally be detected, but the occurence of this fungus is only exceptional, and when the membrane has begun to undergo an acrid putrefaction. So also leptothrix buccalis may be discovered, but it is often found in the buccal mucous of healthy

persons.

Pathology. Diphtheria is a specific blood disease, which runs a rapid course. This is proved from the fact, that in most cases death results rather from the action of the poison upon the system, than from obstruction of the larynx, though cases do often occur in which patients die from the mechanical obstruction to deglutition and respiration, when they might otherwise have recovered from the effect of the poison. Another proof of diphtheria being a blood disease is the diphtheritic inflammation of wounds. When a wound is attacked with this inflammation it becomes painful, discoloured and fœtid and a discoloured serum flows forth from it in

abundance, and a gray soft coating soon covers it with a layer; the edges swell and become painful and of a violet color. The wound often remains stationary for months; sometimes it spreads, and then an erysipelatous blush is seen around it; then it is said that pustules form, become confluent, burst, and leave apparent a diphtheritic patch, which spreads from the head, even to the loins. A gentleman of my acquaintance in Frederick Md had several very interesting cases of this inflammation in his practice. One patient had diphtheritic inflammation of the breast; it attacked another in blistered surface on the neck; but the most remarkable case was that of a child who had

varicella at the same time it had diphtheria, and strange to say, every vesicle on the child's body became the seat of this inflammation. The cutaneous diphtheria has been much more prevalent in some epidemics than in others; it is said to have frequently occurred in the epidemics in France, - leech bites, blistered surfaces, excoriations of any part, varous wounds may become the seat of it. It has been proved beyond a doubt that the diphtheritic affections of the skin are identical with those which are seated in the mucous membrane of the fauces and larynx. In many cases symptoms of low typhoid are present and these cases often terminate fatally or recover after a

long and tedious illness. So the external diphtheritic affections are in no manner less formidable than the internal or faucial variety. A very curious fact has been observed by some writers with regard to the location of the diphtheritic exudation. Although it is found in the mouth, the fauces, the nasal fossae, on the tongue, in the pharynx, the larynx, trachea, and even in the bronchial tubes, on the conjunctiva, in the vulva, the anus and upon the skin, it is not found upon those parts removed from the contact of the air. Thus true diphtheritic inflammation is never found in the esophagus; whilst the exudation of certain aphthous affections shows a great tendency to extend into

this tube and not into the air passages. The atmosphere therefore would seem to promote the extension of this inflammation. Besides the spreading inflammation of the fauces and respiratory tract, with the exudation of lymph, the lymphatic glands of the neck often swell and become tender, especially in scrofulous persons. When cases recover nervous affections of various kinds sometimes supervene, such as otalgia, amaurosis, headache, ophthalmia. Paralysis of various muscles as those of the tongue, fauces, pharynx, neck trunk, and extremities. These nervous affections follow after mild as well as severe attacks, and sometimes there is a short period of convalescence before they show themselves. During the year 1860 there occurred 210 cases of diphtheria

at the Paris Hospital des Enfans, and paralytic symptoms followed in 31 of them, the proportion was considerable, inasmuch as several were removed and others died before the time that these paralytic symptoms usually develope themselves. By some the proportion is considered to be as many as one in twenty or four cases. It is also remarkable that these paralytic symptoms are as rare in the other affections of children as they are common in diphtheria. Thus in the same hospital, and in the same year, among 61 cases of angina simplex, 12 of typhoid fever, 33 of rubeola, 12 of scarlatina, 4 of variola, 24 of pneumonia, not one instance of secondary paralysis occurred. The prognosis, of these secondary paralytic affections, is favorable, since they for the most part disappear under proper treatment.

Causes. Some writers maintain that moist countries and seasons are most productive of this disease. But in the late epidemics both in France and England, many instances are recorded where it prevailed most extensively in warm and dry situations; this is also borne out in our country, particularly in California, where the climate is remarkable for its dryness. It has been known to prevail in all seasons in the hottest weather of dog-days and in the severest cold of Winter. Diphtheria most frequently appears in ill ventilated houses, where the inhabitants are crowded by disease and oppressed with poverty, and common there the disease seems to be infectious. Though it does not appear that the infection may be conveyed by the clothes or persons of those who visit

a superintend the patients. Dr. Fulton now maintained that secretion of diphtheria possessed a special virulence, and that the disease could not only be propagated by the application of the secretion, from one affected surface to a sound part, after the manner of small-pox; but that, like syphilis, it cannot be communicated in any other way. He gives several cases and similar cases have been cited by others in proof of the theory of contagion by inoculation. But Dr. Jacobson failed in his attempts to inoculate himself and his students with diphtheritic matter. Dr. Charles of London also failed in similar experiments upon various animals. Prof. Wood asserts that the cause of ordinary angina will give rise

to the peculiar membranous exudate in those predisposed to it. What constitutes this predisposition is not known, though we regard it as some peculiar state of the blood." We therefore must come to the conclusion that the disease is contagious under some circumstances, especially in its malignant and septic forms.

Diagnosis. Diphtheria might be confounded with common angina, ulcerated gangrenous or malignant sore throat, pseudo-membranous croup, and scarlatina. Common angina is readily distinguished from it by the exudation in the fauces and from the fact that the constitution seldom sympathises with the local affection, and that when there is fever it is generally of the sthenic or inflammatory type. With regard to the gangrenous

sore throat, it is certain that it does sometimes appear at the same time with diphtheria; though it was one of the points upon which Dr. Bretonneau particularly insisted, that there was no relation whatever between diphtheria and gangrene of the fauces, and he seems to be supported in these views by historical testimony, especially of some of the epidemics of the last century. But in some of the late French epidemics researches were conducted with a special view to the solution of this point, and in all cases of a malignant character gangrene appeared, not as a mere accident, but as an expected termination. In the epidemics which occurred in Paris in 1841 gangrenous sore throat occurred at the same time with cases, which in every

as fact presented the symptoms of true diphtheria. The local affection in neither case was preceded by any constitutional symptoms. The fauces presented first appearances purely diphtheritic in all cases. In those cases which in their progress took on the gangrenous result, the secretion became friable and separated from the mucous surfaces. The constitutional symptoms preceding death were those which usually accompany gangrene. Then for, in making out our diagnosis we must remember that although gangrenous sore throat may exist without diphtheria, yet it is by no means uncommon to find the two affections combined. With regard to cases No. 5 & 6 we know now that diphtheria also

includes croup. He remarks "Croup is but the extreme degree of malignant angina" It is evident from this that his idea of croup is, gen. from most writers on the subject. Dr Home, whom it is said first introduced the word croup into medical literature in 1765, first drew attention to the fact, that the formation of a false membrane in the bronchia and larynx is essential to the disease and constitutes the chief source of danger, and his views of croup were not only excepted in England but by all Europe and also by the writings of Cheyne, Cullen, and others. The opinion of these writers with regard to croup is. "that it is an acute inflammation of the mucous membrane of the air passages, distinguished from others by the rapidity of its progress, by the existence

of a concrete pseudo-membrane in the larynx, and by the fact that it primarily attacks children under ten years of age. They regard cold and moisture as the chief causes, and they support their views by all that is known of the seasons and climates in which it is most prevalent, and they also maintain that croup is apt to be sporadic, not epidemic." Dr Watson in his lectures, speaking of croup and diphtheria, says:- "Some analogy with that disease (croup) it certainly has, but the points of difference are strange and more essential. It resembles croup in as much as it leads to the production of an adventitious membrane upon a mucous surface. It differs from it in the position of that membrane which is seldom found in the trachea".

Since letter published in the Lancet which was delivered by Dr Rankine we find the following remarks. "The great distinctive mark between diphtheria and croup, properly so called, is to be found in the locality affected. In both the main feature is the presence of an exudation, but in one it commences in the larynx and trachea, and does not necessarily affect the soft parts above the glottis at all."

"Now one the difference between croup and diphtheria, besides the situation of the exudation is, that the one (diphtheria) generally attacks those suffering with ill health and surrounded by unfavorable hygienic conditions, is extreme in its course. The other attacks persons in perfect health, is inflammatory in its character, acute in its course,

and for the most part proves amenable to anti-phlogistic treatment. The one croup is incapable of being diffused by contagion and rarely becomes, in the usual acceptation of the word, epidemic. The other attacks adults as well as children, is propagated and often occurs in the epidemic form. Sometimes the diagnostic difficulties are very much increased by the presence of both affections at one time. With regard to Scarlatina some have thought that diphtheria is scarlatina without the eruption, and they base their idea upon the fact, that in some mild cases of scarlatina, there is now and then an exudation resembling the diphtheritic variety, and also that albuminuria is sometimes present in both cases. It seems to be proved

however, that the diseases are distinct from each other, though there may be some analogy between them. An attack of scarlatina preserves the person from a second one, but it does not protect him from an attack of diphtheria. A person may have more than one attack of diphtheria and the second may be much worse than the first; while relapses are not uncommon. With regard to albuminuria it often occurs in the first or second day after an attack of diphtheria; but it only occurs in the convalescence of scarlatina. And the sequelae are entirely different, for while there are no formidable dropsical symptoms in the convalescence of diphtheria, which so often takes place during that of scarlatina; neither are there any peculiar loss of nervous power and temporary

muscular debility or paralysis in scarlatina.

Prognosis. Diphtheria must always be looked upon as a grave and serious disease. Death may result in a few hours, from the effects of the poison upon the system; or the patient may linger on for days, and at length be overcome by the severity of the local affection or from the occurrence of some complication. Albuminuria should always be looked upon as an alarming symptom, though cases do often recover in which the urine has been albuminous. Suppression of urine, epistaxis, a very rapid pulse, a very slow pulse, delirium and dyspnoea must all be looked upon as alarming symptoms. The duration of the disease is said to be from three to four days. It must be remembered that the

is no definite relation between the primary symptoms of diphtheria and those of the sequelae, and therefore a favorable or unfavorable prognosis should not be made from the primary symptoms alone.

Treatment. It should be said that there is no specific for this disease. It is the opinion of practitioners of the present day that remedies of a supporting kind are those which are most likely to effect most good. Dr. Bretonneau recommended, in his memoir on the subject, an activity of treatment which by no means coincides with the opinions of practitioners of the present day. Bleeding both local and general, blisters, certain local applications to the pharynx, so far mercurialization, formed the treatment in all cases, in

fact mercury seems to have been the chief anchor of most of the medical men of those times. In the first place attention should be paid to certain hygienic rules, the most perfect cleanliness of person and surroundings, and free and uninterrupted ventilation should be insisted upon if necessary. When the disease attacks a family, the well persons should be sent away, or at any rate kept out of the room in which the infected person is confined. The sick person should also have his own cup, spoon, towels &c &c. It has been recommended that the patient be clothed in a flannel gown, and there is no doubt that this simple precaution has saved the life of many a patient. In the very early stages of the disease if there is much heat and engorge-

-ment about the throat, it is said that cold wet compresses sometimes give relief. As the disease progresses, warm fomentations and emollient applications may generally be substituted. Blisters are to be avoided from their liability to take on a sloughy or diphtheritic appearance. Since the disease is purely of an asthenic character, neither leeches or local bleeding are admissible except in rare cases, it is said that the punctures sometimes take on a sloughy appearance. Some practitioners commence with an emetic and this seems to be advisable, particularly when there is a tendency to croupal symptoms. Purging should be avoided and it seems to be much more plausible to open the bowels with castor oil or a simple enema, than to use calomel and

jalap. There are cases of diphtheria so mild that the local application alone to the fauces may be sufficient; but as a general rule, the disease demands a tonic and supporting treatment. In fatal cases, death takes place from prostration, unless terminations by asphyxia. Stimulants and nourishments should be commenced with early and persisted in. The amount must of course be regulated by circumstances. It is better to give them in divided doses at regular and frequent intervals; if they are rejected by the stomach they should be given by enemata. Enemata should be used when children become very much frightened or distressed by painful attempts to swallow and refuse every thing that may be offered them.

Prof McCleary of the University of Vermont, mentioned in his lecture on diphtheria, the case of his little boy who was a sufferer from this terrible disease, that although it was impossible for him to swallow liquids, since they would immediately regurgitate through the nares, yet he could swallow milk, some facility, pieces of bread soaked in tea but taste. Injections of beef tea, quinine, and brandy are spoken of very highly. Quinine, tinct. ferri chloridi, and chlorate of potass, are the best internal remedies, which has its advocates. The tinct of chloride of iron seems now to be preferred by most practitioners, from its great usefulness, in the more extreme cases of the disease. The dose is from 10-20 drops every three or four hours.

There is an internal remedy, very highly spoken of, which consists of lime of sesquichloride of iron with chlorate of potass, chloric ether, and hydrochloric acid, full doses being given according to the age of the patient, and at the same time free use should be made of beef tea, coffee, eggs, brandy, milk punch. Quinine may be given in mixture without or with dilute hydrochloric acid or in the form of a pill, the dose, of course, must regulated by circumstances. Chlorate of potass, when it is preferred should be given in doses of from to eight grains according to circumstances, in a bitter infusion with from two to five drops of dilute hydrochloric acid. With regard to the local treatment there seems to be some diversity of opinion. Some writers maintain that the disease is

a constitutional one, and that therefore local applications can be of little avail, but this is, evidently, carrying things to an extreme. As for the same general we should not use local applications to other constitutional diseases as syphilis, scrofula &c; but certainly it is that the local applications used by some practitioners should be done away with. Dr Greenhow speaks of these local applications says. "I am persuaded that much mischief has been produced by their indiscriminate use, especially by the frequent treating away of the excoriation with poultices, or similar contrivances, or the application of nitrate of silver, or of other caustic solutions. Observing that the removal of the excoriation, and the application of remedies

to the subjacent surface, neither shortened the duration, nor sensibly modified the progress of the complaint, but that the false membrane never failed to be renewed in a few hours, & very soon discontinued these much loved applications to the tender and already enfeebled mucous membrane."

When the case is seen two or three hours from its commencement, it is said that relief may sometimes be afforded by the inhalation of acid vapour from two or three ounces of vinegar to the point of boiling water. When the peculiar pellicle begins to show itself the fauces should be gently painted with a liniment of tincture of iron, or with turpentine. Hydrochloric acid has also been very highly spoken of as a topical application, in the cases of children

honey is a very pleasant addition to it. In a few cases a combination of chlorate of potass and hydrochloric acid with the tinc. of the chloride of iron has been very highly recommended. The chloride of soda has been very highly spoken of as a very useful gargle; it has the double advantage of correcting the fetor of the breath, and of the secretions of the throat; it is a solution of the chloride of soda, in the proportion of a drachm to six ounces. Many other applications have been recommended and have been used with various success. Among they may be numbered strong solutions of chloride of sodium, either by itself or in combination with vinegar, gargles of tannin, sulphate &c. Chloride, solution powder &c. Nitrate of silver is beyond a doubt,

when properly and carefully used, the most certain of all topical applications. If used in solution, the diseased surface should be quickly and thoroughly scrubbed over by means of a sponge or brush. The strength of the solution should be from 30 to 60 grains to the ounce of water according to circumstances. It is better not to use it in the solid or stick form as it sometimes breaks off. When in spite of all means employed, the disease progresses towards, and the larynx and trachea are invaded by the exudation, giving rise to symptoms of imminent danger, we must then think of the important operation of tracheotomy. There have been many objections raised against the operation, such as the small amount of success, the difficulty of performing, the

operation, the tendency to the production of complications; but notwithstanding all this, there is no doubt, that there are many cases in which the operation is perfectly justifiable, and often times saves the patient from the very jaws of death. There are some things however that must be attended to necessary for the success of the operation. As to the proper time it is of the utmost importance not to defer it until the patient becomes too much prostrated by the disease; neither, of course, should the operation be resorted to too early. The atmosphere of the room in which the patient is confined should be kept moist, this may easily be accomplished by filling the room with steam from simple apparatus. The temperature of the room should also be kept at a fixed point.

Some competent person should always be at hand in case of emergency, to clean out and insert the cannula &c. A cannula of large bore seems to be the best. It is of importance that the medical treatment should be kept up and attention should also be paid to the proper time for removing the tube.

Inaugural Dissertation

on

Gun Shot Wounds

Submitted to the Examination

of the

Hons. Regents & Faculty

of Physic of the

University of Maryland

for the degree of

Doctor of Medicine

By Philip Slaughter

of Virginia

in 1866 & 67

A limited experience gained while a Private in the Army of the Confederate States has suggested to me the propriety of selecting for my Thesis, the subject of Gun-Shot wounds.

Though surrounded by opportunities for acquiring a fund of useful information on this important branch of Surgery, the want of previous preparation and study in consequence of entering the military service at an early age prevented my availing myself as I might otherwise have done of these advantages.

Conscious of my inexperience and of my inability to do justice to so important a

subject, I submit to your kind consideration the small results of my study and observations.

Gun-shot wounds.

I now propose to speak of gun-shot wounds as they are seen both in military and civil practice, which do not differ materially except in regard to the instruments used in their infliction - those in the ones being larger and more destructive to life than those commonly seen in the other, those last being generally the result of accident or of attempts at suicide -

Gun-shot wounds include all those injuries caused by the discharge or bursting

of firearms, but those generally met with in military practice are inflicted by musket and cannon-shot, and the explosion of shells. They partake of the nature of contused and lacerated wounds, and are attended with more or less danger in proportion to the number and importance of the organs wounded, and the extent of the injury received. They are distinguished from other contused and lacerated wounds by reason of the causes that produce them. the appearance they present, the local and general phenomena and special complications that attend them - the results which follow

them - and the conditions under which they are received.

The general character presented by Gunshot wounds inflicted by a cannon-ball at full speed and in a direct line which under such circumstances will be the course pursued by it. Every thing encountered by it will be carried before it and if the part struck be the head, chest or abdomen, the wound will present an opening the size of the missile and the contents will be scattered, which causes life to be at once extinguished. If the force of the ball be reduced - a serious wound may still be inflicted by

its gliding around instead of passing directly through, would produce fractures of bones, or serious injury of deep and important organs without admission of the air. If the shaft should become, by the extremities, it is liable to be carried away, leaving a stump which presents a contused mangled and pulpified appearance with shreds of muscle and integument hanging down which presents little appearance of vitality, containing splinters of bone among them, and frequently the shaft, which has shattered far above the site of

Transverse division or
in two due to the remote
and lower may extend
this division. If the bar
be traveling with reduced
velocity or so far a spark
as to be termed a spark
ball, the dark streak
will not be carried a
long, but the appearance
of lightning moving and transmutation may be pro
duced, without their
being a solution of con
tinuity, and yet, not
withstanding the absence
of these, internal injury
may be produced sufficient to cause disorgan
ization, and even death.
Wounds produced by
concentrated shell are
similar in all respects

In these cases, many blocks, just after explosion, the fragments often reached from formation and contraction of rock masses and combustion of lava, without carrying away the part as do modern shells.

When fragments of shell fragments, the cities of enhances in which smaller than the fragment from the reduced force with which it travels not being sufficient to destroy the vitality and constructility of the rock into which it has.

Small projectiles.

the musket and rifle balls propelled with force sufficient to penetrate the body, have one or more features presenting the appearance corresponding to the size and velocity of the projectile which produced it. If the wound is inflicted by a rifle ball fired near the surface, as is usually the case in suicidal attempts, the appearance of the wound is that of a round hole with inverted edges, and a dark discoloration extending for inches around it, caused by the burning of the powder. For such cases a mask is sufficient

to produce a serious
and even a fatal wound
besides rending and tearing
Cir. on account of the ent-
-ire mass of metal being
to be driven inside the
skull causing a pro-
-nounced shock or a
concussion effect.
Either a bullet which strikes
at a greater distance
does not with sufficient
velocity to penetrate
the flesh, the appearance
presented will be very
in different, which is
further in contrast
showing the edges of which
are irregular and turned
in the direction in which
the ball was proceeding
with a dark red discoloration around the

contusion or the wound may be death like indeed. If the ball hits each the wound of exit will be generally larger than that of entrance, the edges everted, with more or less bruising of the subcutaneous adipose tissue, this appearance is very marked if the wound is secondary after inflitration of the orbit etc. by tissue and manipulation. Wounds or bruises by other projectiles the above appearance more marked than do the cylindro-conical or minie balls, as they are generally called, the latter in passing through the flesh

front of the body with
a great velocity, have
wounds in which
it is difficult or even
impossible in many
instances from the ap-
pearance to distinguish
between the orifice of
entrance and exit,
when both the orifices
is visible, it may
be inferred that the
ball has lodged, but
this is not invariable
it may, as the ball
may traverse the body
or limb and make
its exit at the orifice
at which it entered
or it may split into
several pieces, and
each piece causes an
opening of exit, or at

of wounds may be made by a single ball traversing different cavities of the body according to the direction line with the course in which it is traveling, or the ball may be deviated from a direct line, or both in which it is passing through several parts of the body, making many wounds which may be taken for the entrance of as many balls.

The appearance of wounds caused by small pieces of shell or balls altered in shape by contact with stones or other hard and resistant substances

Injuries to this entrance differ from those of other bullets, causing more laceration and contusion, and are more liable to be fatal, as their force is much spent by previous contact, in which case, they produce lock nuffing, that of entrance.

A gunshot wound caused by a rifle or musket ball is attended by a variable amount of pain depending on the extent and nature of the wound, the state of the mind and the condition of the patient at the time of its infliction.

If this ball will not be considered to have been received, and it only made mention of the death effects of shot, at other times, you will compare the sensation experienced at the time of its infliction to the blow with a cane when a ball strikes a dark without entering. The contusion is said to be more intense than if the ball had entered. There a bone is shattered, or a limb carried away or a large cavity laid open, and a vicious wounded brain is sure to prominently a prophet as the alarm and shock that follows

The shock is generally in proportion to the extent of the injury, but is never constitutional the injury is to the pons in the shock of the life blood. The shock is also said to be greater if a vessel is struck while in action than when passive before. If a ball has entered the body through its cavity although he recovered, the prostration of the shock is sufficient evidence that some important organ is implicated in the wound. Primary hemorrage of a serious nature has not often come under the observation of the surgeon for if a man is wounded

death rapidly follows before he can recover - but if a small artery is wounded the inner and middle coats contract and retract within their cellular sheath - the artery becomes tapering towards its divided extremity, and finally closed with coagulum - Veins these coats seem to be rarely so far withdrawn from the seat of injury - but the vessel may be seen to pulsate - and under such circumstances hemorrhage is much less likely to occur than if it be only wounded - as is not unfrequently the case in the lower extremities - when a bone has been fractured - large vessels

injuries being produced
as is frequently the case
when wounds are inflicted
by rifled guns, which
are not calculated from
their large size & shape
and the velocity with
which they are propelled,
to cause much laceration.
Diagnosis should be made
as soon as possible after
the arrival of the Surgeon
as it can then be done
with more satisfaction
to him and with less
suffering to the patient
than if a longer time be
allowed to elapse before
it is attempted. It should
always be borne in mind
to place the patient as
near as possible in the
position in which he was

at the time of the reception of the embryo — as in recent instances the examination will be worth considering & attention to this simple expedient. When any one opening has been made — it may be presumed that the bile has lodged — and hence should be made accordingly — and if such its positive effect is lost. But should the orifice be discovered — it is most probable that one is that of entrance and the other the exit of the same bile — but not withstanding — examination should be made lest some foreign bodies should be with — which are frequently carried in by a bile duct

become entangled in the
[illegible] parts - while the ball
itself may have fractured
[illegible] on the other hand
two elevations may indi-
cate the entrance of two
separate balls which
may have received from
opposite directions. The
examination of the clothing
worn by the patient at
the time he was wounded
will often serve to determine
whether pieces have been
carried into the wound -
and thus valuable time
is often saved to the surgeon
and the patient spared
much suffering. Of all
the instruments in use
for the examination of
gunshot wounds the finger
of the surgeon is the best

[illegible] being [illegible]
the [illegible] it is left [illegible]
to be [illegible] by [illegible],
and [illegible] it [illegible]
it gives a more correct
idea of the condition of
the parts than could be
gained by the use of an
other instrument. When
the finger is not long
enough to reach the bot-
tom of the wound, a long
silver probe capable of
being bent to reach the
direction in which the
foreign body should
be substituted, but if
it could be reached with the
finger, [illegible] by it
alone [illegible] [illegible]
[illegible] have escaped injury
from the [illegible] slight
[illegible], and in all cases the

probe should be allowed to guide the surgeon in so doing to guide it and to extract the case in the hands of the surgeon. The same remarks apply to wounds of the extremities and to superficial ones in other parts of the body, as wounds which have entered water, tow or a similar thing, which of the use of a probe and besides the attention of the surgeon should be directed to matters of immediate importance as to the hemorrhage &c.

As soon as the presence of a ball or other foreign substance is ascertained it should be removed if practicable if long time from the wound of entrance

it may easily be extracted through it, by means of some one of the forceps made of linen, cut in any form for the purpose, but if of a light character should be used, and drawn right forth in its direction. Should the bullet lie near the opposite side of the limb a counter opening should be made sufficient to admit of its ready extraction, and at the same time care should be used to place it in the most advantageous position to effect this object.

The general indications for treatment in gunshot wounds are very few and simple. If hemorrhage

cyesis from the wounding of a large vessel it should be carefully avoided, with the first and most careful attention from the surgeon and should it be considered, in most instances, to remove his patient safe or his death performed until the hour of recovery of the wound of a limb.

Keep remove foreign bodies, cleanse the wound, make the patient as comfortable as possible, place the patient in a condition to procure relaxation in the muscles surrounding and protect the part from all external injury. As shock supervenes, a cup of encouragement from the surgeon together with a little wine, brandy, or ammonia in water, &c.

[illegible]
[illegible] wise after the [illegible]
[illegible] to bring about a union.
In [illegible] [illegible] [illegible]
[illegible] of the [illegible] [illegible]
[illegible]
it will not be [illegible] [illegible]
under favorable circumstances
if [illegible], but the trick
in view is merely to bring
the parts as near as [illegible] [illegible]
in their normal position
during the subsequent stage
of healing by granulation
and cicatrization.
In all Gunshot wounds much
discomfort to the patient is
prevented by keeping the
wound clean, and the remov-
al of all blood and clots
can easily be effected
by the use of a sponge and
a little warm water.

If the wound be a large one and it be reasonable to use cold applications for the purpose of checking inflammation such cloths may be applied, which require to be frequently changed or a stream of water should be allowed to fall continually on them to prevent their becoming hot and warm. In the choice between the use of cold and warm applications the best rule to be followed is the sensation of the patient. When suppuration takes place warm water must be resorted to for the purpose of preventing the accumulation of pus and the formation of abscess or sinuses.

If the wound be a bruised

syringing may be practised for the purpose of washing out pus and foreign substances that have accumulated in the pocket of the wound.
Fluid pressure with a roller and frequent change & dressing is often required.
Cloths dipped in creosote and water or some disinfectant liquid will obviate the accumulation of flies and the attraction of insects with disagreeable effluvia that may arise.
For the purpose of holding the part in position strips of adhesive plaster or sutures are necessary. Moist lint applied over the part by means of adhesive strips or a bandage at the same time carefully avoiding all unnecessary

degree of pressure weight and warmth is often useful. The constitutional treatment should consist of good hygenic regulations the avoidance of all irregularities of habit with proper attention to the excretory functions. The diet should be nutritious, but not stimulating - together with a plentiful supply of fresh air.

Jno. P. Slaughter.

AN

Inaugural Dissertation

ON

Digestion

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

J. Frank Thomas

Of

Frederick Maryland

Session of 1867

Digestion

Digestion is that process by which food is reduced to a form in which it can be absorbed from the Intestinal canal and taken up by the bloodvessels.

All food taken into (into) the mouth is almost invariably solid, even those substances which are naturally fluid such as milk the white of eggs and others of a similar character, are generally solidified by the process of cooking preparatory to entering the stomach. All food therefore requires to undergo a process of digestion before it

can be absorbed.
When it is received into the canal running from the mouth to the anus (known as the Alimentary canal) it comes in contact with certain digestive fluids which serve to dissolve it. These fluids are secreted by different internal organs of the body, and are also different from each other, each fluid calculated to act upon the different kind of food thereby preparing it for absorption. That portion which is absorbed by the vessels consists of fluids. While the remainder

retaining a firmer consistency is discharge from the intestine under the form of "Faces" the process of digestion to a considerable degree is quite complicated. The "Alimentary canal" being divided into different compartments, each communicating with the other by narrow orifices. At its commencement we find the cavity of the mouth, then passing on we find the Pharynx and Oesophagus the latter communicating with the Stomach. Then we reach the Small Intestines, which owing

to the varying structure of its mucous membranes has received the name Duodenum Jejunum, and Ileum and finally we arrive at the large Intestine which terminates at the lower extremity the Anus. The muscular coat of the Alimentary canal is composed of a double layer of longitudinal and transverse fibres, which by their alternate contractions and relaxations convey the food from the mouth through the Alimentary canal to

the Anus. In its passage through the canal it meets with no less than five different digestive fluids. First in the cavity of the mouth – the Saliva – Second the Gastric Juice in the stomach third the bile fourth the pancreatic Juice, fifth and lastly the Intestinal Juice,

The most important phenomena in modern researches on digestion is that different elements of food are digested in different parts of the Alimentary canal by the

agency of different digestive fluids.

We will now attempt a careful but succinct examinations of these fluids distinctly and separately, however commencing with "mastication" In the first division of the alimentary canal "namely" the mouth. the food undergoes two different operations - mastication and insalivation. mastication consists of trituration of food by the teeth which is absolutely necessary

in order that the digestive fluids may perform the more readily their proper functions. As the action is purely chemical in its nature it will be exerted on more promptly than in a solid form.

By being well masticated it offers a much larger surface to the contact of the fluid thereby rendering it the more easily to be decomposed. For if it was taken into the stomach in a solid form the digestive fluid would be utterly

unable to perform their proper functions or decompose the food thereby causing all diseases that can be brought on by imperfect digestion which are too numerous to pretend to mention here, The Anaconda for instance has been known to remain for days in a stupid condition after swallowing large quantities of food in a solid form. The digestive fluids being unable to act upon it has not being previously masticated. We can easily deduce from the above

statement the great impor-
-tance to the digestive process
of a preliminary mastication
At the same time the food
is masticated it is mixed
with the first digestive fluid
viz: the saliva. The saliva is
not a simple fluid but is
composed of four distinct
fluids, which differ from each
other in their physical and
chemical properties. The saliva
performs a double function
viz: that of aiding in digest-
ing the food as well as to
serve to lubricate and assist
it in its passage down

the oesophagus. food that is hard and dry like crackers for instance cannot be swallowed with readiness unless moistened by some fluid. Consequently if the saliva was prevented from entering the mouth it would not only render deglutition difficult and laborious for dry food. but even that of a tolerably moist consistency such as fresh meat &c. After undergoing a thorough mastication and insalivation in the mouth is prepared for its entrance into the stomach

and is aided in its passage by the muscular contractions of the Oesophagus.

That part of digestion which takes place in the stomach has been regarded as one of the most important of the whole process. It has been attributed to a digestive fluid secreted by the mucous membrane which penetrates the food and reduces it to a fluid form. This process however is regarded as a chemical one. And it is thought that all substances taken

in the Alimentary canal are capable of being dissolved by the gastric juice, The gastric juice like the saliva is secreted in considerable quantity only under the stimulus of food.
It is thought to be entirely absent during the interval of digestion. Another important action which takes place in the stomach besides the secretion of the gastric juice, is the peristaltic movement of that organ, this movement is accomplished

by the alternate contraction and relaxation of the circular and longitudinal fibres of its muscular coat. The time required for digestion in man varies from one to five hours. It however depends how well the food is masticated, as well as upon what the individual eats as some things are digested much sooner than others. The secretions of the Gastric Juice is much influenced by the nervous conditions of man.

Every one is aware how

readily any mental disturbance. such as anxiety anger &c. will take away the appetite and interfere with the digestion It is often noticed. that when any annoyance or hurry occurs soon after the food has been taken into the stomach digestive process is not only apt to be suspended for a few hours but it may last the entire day.

In order therefore that digestion may go on properly it is necessary that food should be taken

only when the appetite demands it. It should also be thoroughly masticated at the commencement and both mind and body, particularly during the commencement of the process be free from any disagreeable excitement; The next comes Intestinal juices. From the stomach those portions of the food which have not already undergone digestion, pass into the third division of the Alimentary Canal, viz: the small Intestine, here they meet with the

mixed Intestinal fluids. which are acted upon at once and converted into saccharine substances. and then rapidly absorbed. Now for the last the pancreatic Juice;
The only remaining ingredients of the food that requires digestion are the oleaginous substances. Very soon after its entrance into the intestine, the oily portions of the food loses its appearance and is converted into a white opaque emulsion which is gradually absorbed. These substances

are then ready to be taken up into the intestines as we have just seen, the secretions are intended to act exclusively upon the food to liquefy it and prepare it at the same time for absorption. But throughout the large intestine the contents of the Alimentary canal exhibit a different appear=ance, and are distinct in their color, appearance, odor and consistency. This portion of the Intestinal contents are known as excrementitious substance

which finds it way into the intestine by excretion and is finally discharged through the Anus.

Gentlemen it is true a great deal more could be said upon the subject of digestion but hoping that my remarks may prove sufficiently clear and to the point. I have the honor to subscribe myself Your most obedt. Servt.

AN

Inaugural Dissertation

ON

Rubeola

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Wm. T. Spalding

of

St. Marys County Maryland

Session of 1867.

Rubeola

This is a disease of minor importance, than many other of the eruptive fevers. It receives its name from the red color of the eruption, however it is commonly known throughout the country as Measles, it is true that this is a disease of no great moment, but should not be overlooked as unimportant by any means, inasmuch it is so common in this country, that we will be frequently called upon to Diagnos such diseases; indeed it is a matter of no little difficulty for the practitioner, to discriminate one eruptive fever from the other,

and this should be done as early as possible, for we are aware that there are other eruptive fevers bearing close resemblance, which are more contagious, and attended with much more serious consequences; so it is a matter of great importance for us to be able to distinguish one eruptive fever from the other, and thus avoid the wide spread of contagion throughout the community at large.

This fever has three different names viz; Rubeola Morbilli, & Measles; I will make use of the former name as it strikes me is the one most applicable,

I will in the first place begin to speak of its anatomical characters, it being most convenient to consider them in describing the symptoms of the disease. Local symptoms: in this stage it resembles that of an ordinary attack of bad cold, or in other words an attack of Influenza; the peculiarity of the fever which precedes the eruption, that it is very constantly attended with inflammation of the mucous membranes, and this is most commonly of the airpassages; there is coryza with frequent sneezing, and

coughing, discharge from the nostrils; the eyes become vascular intu-
-bled, & reddened, and presents a watery appearance; tears may be seen flowing frequently from them, great intolerance of light. Laryngitis is present, denoted by alterations of the voice; such as hoarseness, the cough is generally dry; symptoms of Bronchitis are frequently present; thus giving rise to more or less general disturbance, sometimes the Pharynx is the seat of inflam-
-mation; with these various Local affections, which differ in various cases; there are

associated more or less lassitude, followed by shivering, and chilly sensation; but hardly if ever ushered in with a marked chill; these are followed by heat of skin, acceleration of the pulse, and there is great desire for cool drinks, indeed often an intense thirst, the appetite becomes impaired; in some cases there may be vomiting; more or less pain in the head and limbs; but these depend in proportion to the amount of febrile excitement, they are less intense, than in the stage of invasion of Smallpox,

and Scarlet fevers, in some cases there may be diarrhea, and at the same time vomiting; on the other hand, constipation is often met with; these symptoms are more common to children and often leads to convulsions, but such instances are not to be considered as very dangerous, and in the third stage false Croup with children, this stage ~~may~~ may last from four to five days, therefore the duration is about two days longer than in Variola, fourty-eight hours longer than in Scarlet fever. However we meet with

cases; in which the duration is four, five or six, and even longer, and in others on the contrary may be, but one or two days.

Stage of Eruption the regular period for the eruption to make its appearance; is on about the fourth day; sometimes it comes out sooner; frequently the eruption does not come out until the fifth day, and thus you may distinguish by the slow extension of the rash, that the disease is not Urticaria or Scarlatina, the eruption when it first can be seen is of very minute red specks,

which in a very short time become large slightly elevated above the general surface of the skin, and this is best marked on the face which is sometimes swollen; these little red spots, then become blended together in circular or crescentic forms, the papules are very much alike those in Variola previous to the recognition of the vesicles, but they are much larger, and feel soft to the touch, also they have somewhat the appearance of flea bites, and if you press your hand on them the redness will disappear for a moment; one of the most

characteristic signs, which Rube-ola, may be known from Variola; the fever does not cease or even abate when the eruption has come out; but in the majority of cases, may increase in intensity inasmuch in the stage of eruption symptoms denoting Coryza & Lynts. remain unaffected, and continue for some time, and thus give rise to more or less abundant expectoration, and by auscultating the chest you will have dry & moist Bronchial rales; the tongue is in many instances is coated, and sometimes elongated, blisters can be seen projecting between

the coating presenting the appearance of a number of red points.

Desquamation; this begins when the eruption commences to fade away, and its duration last from four to seven days, desquamation does not take place in all cases; in uncomplicated cases, this may be said to be a stage of convalescence. It is always tolerably well marked the epidermis being exfoliated in bran like scales or in flakes, at the same time febrile symptoms gradually disappear, occasionally the eruption on skin reappears, and after having lasted

the usual period again disappears, and in this stage diarrhea is apt to be present. I will now begin to speak of a much more mild form of the disease, known as Measles, Rubeola Sine Catarrha. in this form of disease the Schneiderian membrane Larynx, and Bronchial tubes are very little involved, therefore is of very little importance exclusive of the liability of confounding it with Scarlatina; the eruption is preceded by symptoms of constitutional disturbance, which passes away in one or two days.

True Rubeola in a majority

of cases, when of a grave type is most always complicated, and we find these complications seated in the respiratory system, true croup is sometimes developed; capillary bronchitis is an other complication, and when it attacks children under four years of age most always proves fatal, still this does not occur in private practice, found most commonly in Hospitals; we may class pneumonia as the most frequent of all complications, and are attended with much danger in children, when the eruption does not appear at its regular

period you may rest assured that the disease will be more dangerous, but even here the Physician should take into consideration the thickness of the skin; for instance children who have a thin delicate skin, the eruption sometimes appears on the third day, while those who have a thick brown skin; it may not come out before the fifth day.

Causes of Rubeola. A specific contagion; It is scarcely doubted, that there is one specific cause of Measles; the infectious miasm, is not only received,

by those brought into contact with those affected with the disease, and is supposed by many of being capable of acting upon others through the air, by means of fomites — persons visiting Rubeolous patients, may contract the disease, and thus it is carried from one neighborhood to the other, it prevails much more at some periods than at others; this is owing to a peculiar epidemic influence — in what manner this acts, is not well understood, during epidemics all who have not had the disease is liable to it, cold weather appears to be the time, when the

disease is in full bloom, but it occurs at all seasons; no age is free from the disease, but few persons pass through life, but what they have been attacked by the disease, it usually attacks the same individual more than once; still there are cases related where the same individual has it twice." "J. J. H. Balisbury of Ohio has communicated certain facts or observations, as showing that the inhalation of the fungi of wheat straw, undergoing decomposition is capable of producing Rubeola; that by inoculating with spores, and cells of the

fungi of a foul & gus. a disease may be produced resembling Rubeola, and that persons in whom infection is in this way produced are rendered insusceptible to the disease.

Diagnosis-

Diagnosis has been almost sufficiently described, in speaking of the history of the disease. In the first stage Rubeola, may be easily mistaken for Catarrhal fever, although the hard, red eyes, is almost sufficient to make the distinction. Even in adults however some uncertainty exists until the eruption comes out. It is indeed very difficult to diag-

positive, definitely if Inflammation is at the time present. The only diseases liable to be confounded with Rubeola, when the eruption has come out are Small-pox, and Scarlet fever, and this in great part has been pointed out in speaking of the various stages of the disease: now for us to make ourselves safe in regard to the distinction between Rubeola & Variola, we have to look for two kinds of Small-pox, in order to make ourselves acquainted with the diagnosis. Big distinct and confluent; in the distinct

variety the subsidence of the fever is a sufficient diagnostic sign; In the confluent form it is more difficult, though eruption be present. But in Rubeola the rash is less prominent, and hard under the fingers, and the question is very soon decided by the immovable character of the Rubeolous eruption, while Variolous is rapidly becoming vesicular, and umbilicated.

Prognosis.

When the disease is not complicated the Prognosis is generally favorable, but in

very young children, when the eruption takes place before the third day or when it suddenly disappears the prognosis unfavorable. Pseudomembranous croup is one of the malignant types, if it attacks the patient from the very onset of the disease, it will often prove fatal, so it is to be seen that the chief danger arises, when there is much Bronchial, and Pulmonary inflammation, and the danger is probably more serious in the declining stage, than during its progress. When the gastrophlemonary symptoms are slight,

and the skin becomes moist after the appearance of the exanthema, I would consider the case to be a favorable one; Children while teething are attended with much danger, also when there is obstinate diarrhea. The vicissitudes of the weather must be taken into consideration, the disease is more dangerous in cold weather, than during warm weather, old persons do not bear the disease so well as children, Among the unfavorable signs, when the fever is severe in the beginning and continues to run high before the eruption comes out.

restlessness, the patient tossing himself about in the bed, coma delirium are considered to be very unfavorable.

Treatment- In the ordinary uncomplicated cases nothing is more requisite, than to keep the patient on low diet, and attend to the state of the bowels, in point of fact if the Hygienic law be enforced the mildest forms require nothing more, and nature will accomplish a cure- However in the treatment it should be borne in mind, that the patient should not be so exposed, as to be suddenly

chilled, on the other hand neither should the room be too hot, as it is well known at present, that Rubeola, will not bear heat as well as in a case of Variola or Scarlatina, one of the very best rules is to keep the patient comfortably warm, bed clothes must not be of such weight as to oppress the patient; Children require vigilance as they are generally restless in state of fever, & thus become exposed to the cold, & such exposure aggravates the case very much Now if I was called to see a patient, who had a mild form

of the disease, if the patients bowels were constipated, I would give a Saline Cathartic of some kind; palliative drinks such as Flax Seed Tea or some other diaphoretic medicine, as a draught, containing from two to three drachms of the Spiritus Aetheris Nitrici, with about an ounce of camphor water to be given two die - Infusion of Slippery Elm; and a host of other remedies, which I could make mention of, but I deem it unnecessary, as I am speaking of the mild form of the disease.

If signs of Pneumonia or Bronchitis,

be present, and inflammation-
treatment with a view to stop,
some have thought it best to
resort to Blood-letting by means
of Cups & Leeches, but it is the
opinion of many that this is
seldom if ever necessary, still
if the indications calling for
venesection were present, there
would be no objection to taking
blood in small quantities.
When croupy symptoms come
on, the use of emetics may
be instituted, such as Ipecac,
this followed by a cathartic,
Calomel would be very good,
as long as croupy symptoms

use. Syrup. of Squill may be administered to great advantage. Opiates are recommended in the early stages; The eyes in Rubeola often require treatment, and this is best done by demulcent liquids made from Sassafras pith, mucilage often not as well as any thing else, weak solution of Sulphate of Copper; troublesome cough may be relieved after the eruption by means of opiates.

Retrocession of the eruption & its retardation often puzzles the Physician, as to the best mode of treatment, some

think it best to let nature take its course, and I dont know but what this would be my plan if there were no unpleasant symptoms; if I saw evidences that internal mischief were going on, my first object would be to bring the disease to the surface, and to do this I would use the hot bath; warm drinks may be given with great advantage, such as infus. of Balm &c. Small doses of Dovers powder: in cases of general debility I would make use of Stimulents internally such as preparations of Ammonia & Aether, wine whey &c. During convalescence there is

often diarrhea, if moderate should not be checked, but if there be much pain, & trouble, should be treated as any other ordinary case; small doses of Dover's powder. Tonics & mild astringents may be used.
Cholera Infantum Relapsa is to be treated as other low forms of disease, Stimulants, Tonics and Cathartics, are to be resorted to, but great care must be taken in regard to their administration; Calomel in such cases are said to be very well borne; in conclusion I will say something in

regard to the period of convalescence, the patient should not expose himself to the inclemency of the weather for a long time, that is not to go out doors for several days after desquamation.

An
Inaugural Dissertation
On
The Heart, Anatomically and
Physiologically considered.

Submitted to the examination
of the
Provost, Regents and Faculty,
of
Physic.
of the
University of Maryland.
for the degree of
Doctor of Medicine.
By
H. H. Jones.
of
Virginia.

In order to understand properly the different functions of an organ, we must first understand its Physiological Anatomy, and then we can more intelligibly describe its function.

The anatomy of the heart varies considerably in the different classes of animals,

That of the Fish being the most simple, Here the heart consists of two principal cavities. viz. Auricle and Ventricle.

The heart of the Reptile comes next in order of simplicity, having two Auricles and one Ventricle.

Last but not least in importance comes, that of the Mammalia. It is to this we wish to direct our special attention, Here the respiratory process being

exceedingly active, and the Lungs the only organs by which the blood can be properly aerated. In order to facilitate this aerating process, we have in man a double circulation, known, as Genl; or Systemic & Pulmonic. To meet the demands of this double circulation, we have a double heart. (One side venous the other Arterial.) The two sides of which, though united externally, are separated and distinct internally.

This the great organ of circulation, is situated in the middle Mediastinum. The heart is enclosed in a fibro serous membrane, belonging to its self proper. The Pericardium. This like all other serous membranes, is a closed sack, consisting of two layers, One external or fibrous, the other internal or serous. The fibrous layer is attached above

to the great vessels emerging from the base of the heart, forming as it were its root. Below it is attached to the diaphragm. The serous layer invests the muscular walls of the heart, and is then reflected upon the inner surface of the fibrous layer. It might be remarked in this connection, that this sack contains normally about two drachms of fluid, this is important to remember, from the fact that it has been mistaken for effusion into the pericardium.

The Heart is a hollow muscular organ, situated obliquely in the chest, the base is directed upwards & backwards, towards the right shoulder. The apex is directed forwards & to the left. pointing to the fifth intercostal space. It weighs in the Female, from eighth to ten ounces, in the

male, from ten to twelve, is somewhat conical in shape, Has four cavities, a Rigth & left Auricle, with a corresponding ventricle. The former surmounting the latter, and forming the base, The heart is held in position by the great vessels springing from its base. They hold the base comparatively stationary. While the apex is free.

This organ is made up of two layers of muscular fibres. The most superficial layer runs in a spiral direction; from base towards the apex, being twisted as it were from right to left. it is then reflected & becomes deep, and terminates in the Columnae carnae, & inner border of the Auriculo-ventricular rings. The deep layer of fibres are very nearly circular, in their direction, having their Origin & insertion in the auriculo-ventricular rings & fleshy columns.

There are two peculiarities about these fibres, First they are striped having the appearance of a voluntary fibre; while in function they are Involuntary. Second, they anastamose with each other, which is a distinctive characteristic of these fibres alone.

The auricles & ventricles, as above mentioned, have many things in common, but for clearness of description, we will consider them separately.

The Right Auricle is larger than the left, while its walls are thiner, being about one line in thickness. its normal capacity is about two ounces. It has entering into it the following foramina. One for each vena cava. Coronary vein, Foramina Thebesia. & Auriculo-ventricular opening. The venae cavae, have no valves

proper. but are supplied with circular fibres, which to some extent fulfill the office of valves. The Coronary vein (which conveys the venous blood from the structure of the heart) According to Dr. Wilson, is supplied with a semilunar fold of lining membrane stretching across its mouth, which during contraction of the auricle is pressed firmly upon the opening, thus preventing regurgitation into the coronary vein.

The Foramina Thebesia, are numerous little openings, through which the blood is constantly exuding from the structure of the heart, directly into the right auricle.

The Auricuło-ventricular opening is the opening of communication between the auricle & corresponding ventricle.

In the Foetus in addition to the above, you have a direct communication between the auricles, through the Septum auricularum, This opening is known as the Foramen Ovale. The Eustachian valve is but a fold of lining membrane, which serves to conduct the blood reflected from the Ascending vena cava, to the foramen Ovale. This foramen is closed very soon after birth, leaving a small depression; known as the Fossa Ovalis.

The great bulk of the heart is made up by the ventricles. The Right ventricle is prismoid in ~~shape~~ & forms nearly the entire anterior portion of the heart. its walls are about 2½ lines in thickness. Its normal capacity is about 2½ ounces. It presents for examination two openings, viz. Auriculo-Ventricular & Pulmonary,

both of which are provided with valves. known as the bicuspid & semilunar. The bicuspid are three triangular folds of lining membrane, strengthened by a thin layer of fibrous tissue. They are connected by their base around the auriculo-ventricular opening, while to their thickened apices, they give attachment to a number of slender cords. (chordae tendinae) These are as it were tendons of thick muscular columns. (Columnae Carnae) which serve as muscles to the valves.

During dilatation of the heart, while the blood is flowing in to the ventricle, these valves flap back against the walls of the ventricle & offer no resistance whatever to the onward flow of blood. But when the ventricle contracts upon its contents, the pressure of

the blood upon the ventricular surface of these valves, causes them to flap back & completely close the auriculo-ventricular opening, there being but one other opening the blood is forced on as it should be, through the pulmonary opening in to the pulmonary Artery.

But one very important fact should not be overlooked. If from any cause, there is any obstruction to the passage of the blood through the pulmonary circulation, causing the lungs & right side of the heart to be surcharged, by a peculiar and happy anatomical arrangement of the muscular apparatus of these valves, a normal regurgitation can take place, thus fulfilling the office of a safety valve to the lungs, where there is more of the

circulating fluid sent than can pass through with out injury to their delicate structure.

The semilunar valves, are also three in number. They are situated around the pulmonary opening, consisting as in the former case, of a fold of lining membrane. Strengthened by a thin layer of fibrous tissue. They are attached by their convex borders, & free by their concave, which are directed upwards in the course of the vessels. offering no resistence to the onward flow of blood.

The margins of these valves are thickened, and present at their middle a fibro cartilaginous tubercle (corpus Arantii) which when these valves are flapped back, completely closes the little triangular opening, that would other wise be left by the approximation of these semilunar folds. It was formerly maintained

that there was no safety valve principle existing at these valves. But it has been demonstrated; by recent experimenters, that under extraordinary circumstances, there is also some normal regurgitation through this opening. Hence we have two safety valves on the right side of the heart. both of which, serve to relieve the lungs when over distended, by allowing the blood to regurgitate, first into the right ventricle, thence into right auricle, which when over distended, causes venous congestion, which is not as serious a matter as congestion & overdistention of the delicate lung texture.

The left or arterial side of the heart, has many things in common with the right, or venous side. Thus the left auricle is similar in shape to the right

Its walls are thicker. hence its cavity is somewhat smaller. It presents for examination five openings, viz. Four openings for the pulmonary veins, and the opening between it and the corresponding ventricle. (Auriculo-ventricular opening). The openings for the pulmonary veins have no valves.

The left ventricle is conical in shape, and forms principally the posterior part of the organ. It forms the apex of the heart by projecting beyond the right ventricle. while the latter has the advantage in length towards the base. Its capacity is something less than the right ventricle. While its walls are much thicker & stronger. Normal thickness about seven and a half lines. While that of the right is put down at two and a half. The cause

of this is quite apparent when we consider the great difference in the amount of labor they are called upon to perform.

The right is only required to send the blood to the lungs. While the left propels the blood throughout the entire system. Its capacity is from 1/10 to 1/8 less than that of the right ventricle. It presents for examination two openings. Viz. Auriculo-ventricular, & Aortic. Both of which, are supplied with valves. They are similar in their anatomical arrangement, to those of the right side. except, that there is normally no regurgitation on the left side of the heart. Thus the safety valve principle is also in existence here, but acts by preventing the regurgitation of blood upon the lungs.

As to the course of the blood through the heart, this has to a great extent been anticipated. Entering the right auricle, through the different openings as above mentioned, it then passes through the auriculo-ventricular opening into the right ventricle; by the regular contraction of the ventricle, it is forced into the Pulmonary artery. Thence into the lungs. where it gives off its carbonic acid, and absorbs oxygen. It is then taken up as arterial blood, by the Pulmonary veins and carried to the left auricle. Thence into the corresponding ventricle. by which it is driven through out the entire system. There is an exception to this course in the Foetal heart. There being as above stated, a direct communication between the two auricles.

The movement of the blood through the cardiac cavities, is not a continuous steady flow, But is accomplished by the alternate contractions & relaxations of the muscular parietes of the heart.

Each of these successive actions is called a beat or Impulse of the heart. These successive actions are accompanied by certain phenomena; which must be considered in detail.

The sounds of the heart are two in number. and are known as the First & second.

The first is synchronous with the impulse & Systole. While the second ~~while the second~~ is synchronous with the Diastole. They differ both in position, tone, & intensity. The maximum intensity of the first, is heard over the fifth inter costal space. At a point

Midway between a line drawn perpendicularly through the middle of the ripple, and middle of Sternum, It is long and dull, and occupies from four tenths to one half of the entire beat. Such has three distinct elements. viz. Valvular, Muscular & Impulse. These different elements have been established by actual experiment.

Thus Dr Flint and others, interposed a silk handkerchief between the chest and Stethoscope. and the muscular element was destroyed. They then placed the Stethoscope over the fifth intercostal space. and the Impulse of the apex against the walls of the chest. was rendered more distinct. In order to show the existence of the valvular element, The finger of the experimenter, was

introduced into the auriculo-ventricular opening, when he could feel the valves flap back against the finger, but the valvular element of the first sound was destroyed. Thus as we think conclusively demonstrating the existence of the three elements.

Not withstanding, the opinions of Drs. Andral & Dallon to the contrary. Who maintain, that the valvular element is the sole cause of the first sound.

The maximum intensity of the second sound; is heard over the region of the aortic & pulmonary valves. That is at a point, corresponding to a line drawn from upper border of third intercostal cartilage, on left side; across the sternum, to the second intercostal space, on the right side. This sound is short and quick. and is synchronous,

with the Diastole of the heart.

The cause of this sound is now universally admitted to be caused, by the sudden closure of the aortic & Pulmonary valves.

The second Phenomenon to be observed; is the movements, which are of a peculiar kind, and have often been erroneously described. The auricles contract simultaneously. So also do the ventricles, Their dilatations are also simultaneous. The auricles contract first. & then immediately follows the contraction of the ventricles. During the relaxation of the ventricles, the blood is flowing in a constant stream, through the auriculo-ventricular openings into the ventricles, the capacity of the auricles being less than that of the ventricles, they become first distended, and instantly contract,

thus forcing their contents into the partially filled ventricles, distending them, whereupon they atonce contract, driving the blood throughout the entire system. These movements of contraction & relaxation, continue to alternate with each other, and form by their recurrence the successive cardiac pulsations. The frequency with which these pulsations are performed, vary under different circumstances, Thus the normal number of pulsations in a healthy adult male, average from seventy to seventyfive per minute, They are increased considerbly after active exercise. They are also slighly increased during digestion. But are diminished during repose. as in sleep &c.

In general terms, however, the number of pulsations decrease from the commencement to the end of life. Being

on an average, according to the most reliable observers. About One hundred and forty at birth. One hundred and thirty during first year. Continuing to decrease. Until in extreme old age. they may be as low as forty five or fifty per minute, The effects of disease upon the action of the heart is frequently well marked. It should not be forgotten, however, that increased action does not, as has been supposed by some, indicate increased force. But on the contrary, the increased frequency, is set up in order to supply the amount of blood required for the actual want of the system. Which cannot be supplied by the normal number of pulsations, when the contractions of the heart are weakened and enfeebled from any cause, whatever that cause may be.

At every pulsation, the heart undergoes certain changes, Thus at every systole; the heart narrows. This is readily appreciated by grasping it between the finger and thumb, at the same time, it communicates to the hand, the sensation of a sudden shock.

It also under goes some change in reference to its relative position to the parts of the chest,

According to Drs Harvey, Moore, Pennock Dalton & others, the heart elongates at every systole, in the direction of its long axis. Adopting the arrangement of the fibres already given, and so admirably illustrated by Dr Dalton. We do not see how this could be otherwise. For it is well known, that when a muscular fibre contracts; it renders it thicker & shorter. At the same time if its direction be

spiral, it tends to straighten it. Hence, during the contraction of the external layer of fibres of the heart. They tend to undo their spiral course, thus producing the rotation from right to left. While the internal layer of circular fibres, contracting and at the same time thickening, causes the protrusion of the apex, or rather the elongation of the organ. Hence it is with the rotation from right to left, and at the same time the elongation brings the apex against the parietes of the chest, which produces the impulse.

The cause of the rythmical action of the heart is not well understood. Many theories have been advanced to explain this phenomena but none are altogether satisfactory. By some it was supposed, that the contact with arterial blood, was a sufficient cause for this

action. But this is disproved by the fact, that the heart will contract after its removal from the body. No arterial stimulus what ever, being afforded.

By others, it is argued; that this rythmical action, is kept up by a principle existing in the blood, and that carbonic acid is that principle, But this is open to the same objection above stated.

Again by others it is thought, that it is connected, with numerous minute ganglia, of the sympathetic system, which with connecting nerve fibres, are distributed throughout the entire structure of the heart. These ganglia it is argued, acting as so many centres or organs, for the production of motor impulse, while their connecting fibres,

connect them into one system, and enable them to act in concert, and direct their impulses so as to excite in regular series, the succesive contraction of the muscular fibres of the heart.

This would appear reasonable, for it has been shown, that the heart of a reptile, may be bisected, and yet these regular rythmical actions will continue in the separate parts. We therefore cannot say, that the action of the right side depends upon the left or vice versa. Nor that the Ventricles depend upon the auricles. for if we separate them, this regular rythmical action will continue. Hence; the ganglionic theory, appears to be more satisfactory than any other theory yet advanced. But here according to Lebert. we have this

all rendered uncertain. For I, (Lebert) says he has observed the foetal heart to pulse, while it is still composed of simple cells, before any trace of nervous system could be traced.

The truth is, that there is some ground for all of the above named theories. Yet none of them are strictly true. For it is evident that the action of the heart cannot be kept up for any considerable time, without the presence of Blood, Carbonic acid and nerves influence all combined.

AN

Inaugural Dissertation

ON

Lycopus Virginicus

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

[illegible]

of

[illegible]

Session [illegible] 18[illegible]

There is probably no organ in the human body whose anatomical structure is better understood that of the Eye. The skillful hand of the expert anatomist, has from age to age with a patience and energy, and a perseverance worthy the cause in which engaged, so divested it of its mystery, so extricated its delicacy of structure, so successfully unravelled its tenuous complexity to the diligent and conjunctive Student of Anatomy, so effectually removed many of the difficulties incident to the subject and an impediment to the learner in his initiatory steps, and so effectually instrumental in casting off its shroud, and vascular attributes to a great extent, a fair opportunity of attaining

[illegible] a proper acquaintance with it, that it is now placed, extricated from its [illegible] apparent entangled condition, and thus [illegible] to be met by the sense of thought, before us, in all its attractive simplicity, only [illegible] from us the amount of [illegible] the anxious enquirer, to render its study successful and complete.

The Eye may be regarded as a great optical instrument, differing, only [illegible] so accurate is our knowledge; so [illegible] an imitation of its structure.) those of human invention in its greater degree of perfection and simplicity, and by its being placed under the direct control and supervision of a mind.

Although such is our knowledge of its anatomy, yet, it is a lamentable truth, and a deplorable fact, that its Pathology has not kept pace with the advanced stage of that science in general, and this can be attributed, no doubt, to the circumstance that this branch of the healing art, has been consigned without reluctance by medical men in general to the exclusive care of professed occulists.

I do not design in this short paper to give a minute description of the eye, or its pathology; but intend merely to make a few general remarks concerning a disease, met with in children more frequently than any other lesion of this important organ, and therefore more apt to be met with in

every day practice.

Inclining, as the eye does a large portion of the different tissues entering into the histological structure of the human body, its diseases would readily be expected to vary considerably in their character, not differing however from the diseases of the other organs of the body, except, perhaps in the great delicacy of the part affected.

Indeed it may be said to resemble a Microcosm in which we can view all the various changes engendered by disease, occurring in other organs and tissues throughout the system: By its transparency we are enabled in a great degree to discover with more precision the seat, and trace with

certainty, and accuracy, the rapid progress and decline of these different morbid changes; we can observe the gradual conversion of the natural and healthy tissue into an unnatural diseased and disorganized structure, and can detect with greater certainty the pathognomic diagnostic symptoms which attend each of its particular affections.

Our diagnosis being thus aided and clearly determined, it is natural to suppose that the therapeutic indications, are, and should be directed with a greater prospect of success.

Inflammation occurring in this organ is characterized by the same morbid phenomena attendant by the

same preservative influences, or followed by the same distinctive consequences and results, which it is found to assume when attacking the differ. T. tissues, entering into the structure of any other organ of the body.

The characteristic signs are to be met with in all of the various organs of the system, but are so modified by the peculiarities of structure, or function of the tissue, or condition of the patient, that they have afforded for the future guet, a basis for numerous distinctions.

Nothing is more clearly proved, than that every acute inflammation of an organ, has its commencement in a single tissue of its struc-

lus, and is accompanied throughout its course by phenomena indicative of the peculiar tissue affected, and once being called into existence, it is extremely liable to extend along the tissue in which it first manifest, or by contiguity of adjacent tissue entering either into the composition of the same organ, or that of a neighboring. And having extended thus, to an adjoining tissue or organ, it is attended by another train of symptoms alike indicative of the structure involved. Again, inflammation having once visited an organ, or one of its component tissues, it renders

that organ or tissue for the future more susceptible to its influence, than it was previous to its invasion, the truth of which experience has amply demonstrated.

No better illustration of these facts is afforded, than what we witness in the different varieties of this great source of disease as it affects this interesting and important organ. The inflammation attacking the conjunctiva a mucous membrane, differs in its appearance and consequences from that attacking the sclerotic tunic, and these again differ very widely from the inflammation which invades the iris, whose rapid progress

and great tendency to destroy vision, when left to the powers of nature alone, is probably unsurpassed by acute diseases of the eye, and none in which the routine of art exercises a more decided, and beneficial control, when timely applied.

The causes of ophthalmic inflammatory diseases are in general the same as those which give rise to inflammations in any other part of the body. The most common are to sudden changes in the temperature of the atmosphere which chill in the outer surface of the lids or upon the vicinity of the eye only, or to the sudden contact of the [illegible]

when it has been preternaturally heated, or to local irritation. Again, they may be owing to a peculiarity of the blood existing in, and tainting the whole system, of which they are but a local symptom, requiring for their cure the correction of the existing diathesis, as in scrofulous conjunctivitis, or rheumatic ophthalmia, or by the application of a specific virus, as in gonorrhoeal ophthalmia or iritis syphilitica, or by blows, injuries, or wounds, as iritis traumaticum.

Sequelæ of Ophthalmia.

Ophthalmia is a common term applied to an inflammation of the

eye ball or eye-lids. They may be either simple or gangrenous. I propose to treat of this form as it appears in persons of a strumous habit, to which the name scrofulous Ophthalmia has been given, and in my opinion, very expressive of the disease, believing, as I do that it never occurs when the scrofulous cachexia does not exist.

We meet with this form of inflammation in the eyes of children more frequently than all others. It is believed that at least nine-tenths of the ophthalmia occurring in children from the ages of one to twelve years, is of this form.

to more general attacks those
resembling well marked Symptoms
of a scrofulous Constitution, such
as have loose and flabby muscles,
moist and pastoral skin,
a feble and languid circulation,
and enlarged and swollen lymph-
atic glands &c.

Although it may come in
children who must or at least
symptoms are absent yet we do
not conclude from this that the
diathesis is not present, rather should
[illegible] the existence of this dis-
as conclusive evidence of the material
manifesting itself in the eyes because

on the delicacy of their structure they are less able to resist its influence, than any other organs

This disease has its primary cause in the digestive organs, and is a result of faulty assimilation of the food, depending upon the causes to an improper diet, being unsuited to the child's tender years & yet assimilative powers, & to an unwholesome condition of the atmosphere, in places where such patients are generally found.

From what I have said you will see that I do not regard this as a local disease, but rather as a symptom of a constitutional affection, depend-

ing upon a peculiar taint of the system. I am aware that I have attacked some high authorities by assuming that this is not merely a local disease, nevertheless, from the cases I have observed and read, I am forced to the conclusion that the justly celebrated German pathologist, Virchow, was altogether mistaken in regard to the nature of the malady. The predisposing causes of this disease, are certainly age & constitution; that its predisposition is clearly proven by the fact that it is more common with children, than any other inflammation of the eye, and that as they approach puberty, it ceases to be the case with this disease.

That constitution predisposes to it, is evinced by the fact that if attacks but few other than those possessing well marked symptoms of scrofulous constitution.

The exciting cause may be an attack of catarrhal ophthalmia, or it may exist as sequelæ of variola, rubeola, or scarlatina; though it may exist as a primary disease without any apparentable exciting cause.

The most prominent of the early symptoms, are great intolerance of light, photophobia, profuse lachrymation or epiphora. The eye lids will be found to be spasmodically closed. The cheeks drawn upwards, and the eye brows de-

dressed, and in the majority of cases, a pustular eruption extending over the face and temples, and not unfrequently, we find the cheeks inflamed and excoriated from the hot and acrid tears, which are continual pouring over them.

The little patient will seek some dark place, and cannot be induced to come into the light. It is just in the stage so common to children of his age; When forced to leave his dark corner he will cover his eyes with his hands or cover them. It protect them from the light & air; I say air, because I believe there is quite as much intolerance of air, as there is of light,

It is generally impossible for the patient to open the eyes even when so desired, because of the great intolerance of light and the spasmodic closure of the eye lids; it then first becomes necessary for the surgeon to open them that he may continue his examination. This is accomplished by applying the point of the index finger of one hand, to the border of the upper lid the point of the thumb of the other hand to the lower lid, then gently sliding them against the eyeball can be taken not to force them against their orbital edges.

When the eyes are open, there will be a gush of tears from them in

[illegible] of the [illegible] of the eye lids. When the eye-lids have been long closed and the edges of the lids be made inverted so as to bring the cutaneous surfaces in apposition, we will find that these surfaces have acquired some of the general characteristics of a mucous membrane.

We seldom find any very marked [illegible] but there may be slight circumscribed [illegible] [illegible] will [illegible] the [illegible] [illegible] seen collected in distinct fasciculi which course from the angle of the eye [illegible]

[illegible]

[illegible]

[illegible] regarded.

The cornea may be so far, [illegible] allowed to run on [illegible] an unfavorable treatment, [illegible] seen be seen one or more phlyctenulæ forming on the cornea: these bind [illegible] extremely troublesome. In these [illegible] numerous small blood vessels passing. And here I will pause to say something in regard to the [illegible] as some pathologists [illegible]

[illegible] ilted, a new formation, but would [illegible] [illegible] [illegible]

[illegible]

[illegible]

corneal part, which is in my opinion con-
[illegible]
origin. But I must return to my sub-
ject. Else where if an acute [illegible]
[illegible] treatment, will penetrate the
proper substance of the cornea, where the
membrane of Descemet will prolapse
through the opening in the form of a
[illegible] to appear visible. This [illegible]
and the aqueous humor escapes; when, we
[illegible] have [illegible] of the
[illegible] [illegible] but [illegible]
[illegible] with [illegible] the [illegible]
the good. [illegible]

[illegible]

[illegible]

[illegible]

[illegible] the [illegible] of the [illegible] the [illegible] of the [illegible] [illegible] [illegible] the [illegible] upon which the disease depends. To accomplish this [illegible] end, our treatment should be, to restore the [illegible] [illegible] of the [illegible] system, which [illegible] [illegible] [illegible] this disease, together with an atonic condition of the system. By the administration of [illegible] use of [illegible] followed by a [illegible] dose of [illegible], [illegible] [illegible] the bowels and with the [illegible] to [illegible] the [illegible] [illegible] in the [illegible] parts. Having corrected the derange-

[illegible] the best condition for the reception of our remedies, the sulphate of quinine, from the stomach. By reason of allowing the sulphate to fill the system, and remaining fixed in it, should be given in large doses [illegible] [illegible] and in these cases [illegible] be combined with one of the [illegible] [illegible] ℞ [illegible] ℥j Cinchonidia gr. xv [illegible] ℥IV ℞. [illegible] [illegible] three times daily, before eating. The dose [illegible] [illegible] [illegible]

[illegible] a solution of nitrate of silver either with a camel's [illegible] [illegible] [illegible] [illegible] 2 or 3 days; should an ulcer threaten to penetrate deep [illegible] the cornea of the eye, or [illegible] [illegible] to the anterior chamber, it should be touched once or twice with the nitrate stick, daily. The use of [illegible] [illegible] [illegible] [illegible]

AN

Inaugural Dissertation

ON

"Scalina"

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

"Charles" "Thompson"

Of

"Maryland"

Session of 1867

Scarlatina

Ever since the year 1557, when the disease was first described by Bolyes, down to the present time it has been a shining mark for therapeutical skill.

Every department of nature has been explored for remedies; and very frequently the Physician in his misguided efforts to cure the complaint, has inflicted more suffering upon his confiding patient than the malady itself; and I have not the least doubt that in many instances the mortality from the disease has been greatly increased by erroneous modes of treatment

In the present state of our knowledge on this subject, we think that there is abundant evidence to prove, that Scarlatina is produced by a specific morbid agency derived from the atmosphere and is both infectious and contagious. That its phenomena are fevers, a bright red rash upon the skin and mucous membrane of the mouth and throat attended with enlargement of the tonsils, and sub-maxillary glands, which after a few days subside, when a general desquamation of the cuticle takes place, and by degrees the patient is restored to health.

1st Varieties and symptoms of

Scarlatina, medical writers have described four distinct varieties of this disease. 1st. Simple scarlatina 2d. Scarlatina anginosa 3d. Scarlatina maligna 4th. Scarlatina latent.

The symptoms of each of these forms of the disease vary so much in different attacks and epidemics, that they require a separate description

Simple scarlatina, is commonly ushered in by lassitude shivering, succeeded by heat thirst quick pulse, and occasionally nausea, headache and sometimes delirium, these vary much in degrees in different cases, from the

slightest disturbance of the constitution to severe fever.

Generally about the second day the eruption appears in the form of red spots first upon the face and neck, and subsequently these coalesce and spread over the trunk and extremities, on the third day the eruption is at its height, and then appears in the form of a continuous bright redness upon the extremities, and large irregular patches upon the trunk of the body. The skin at this period is dry and hot, but it gives to the touch no feeling of roughness

It may, however, occasionally be intermingled with miliary vesicles or papulae, especially when the patient has been subjected to a stimulating treatment; The eruption at this period may also be seen upon the inside of the mouth and throat, which assumes a bright scarlet color; the tongue if clean exhibits the same hue, as the papillae appear through the coating of the fur, and their redness as well as that of the lips afford a strong contrast to its white or yellow color, This is the Strawberry Tongue

of some writers, and is highly characteristic of scarlatina from the fact that it is very rarely found in any other disease.

Dependent upon the occurrence of the eruption in the fauces, there is always more or less sore throat. On the fifth day the eruption usually begins to decline, and in a day or two afterwards together disappears, its departure being attended with a general desquamation of the cuticle of the whole surface of the body.

Scarlatina anginosa is a more aggravated form of the disease. The precursory symptoms

are always more violent than those just described.

In many cases the first difficulty complained of, is a sudden stiffness of the neck, throat, and angles of the jaw, accompanied by uneasiness in swallowing which on the second day becomes more painful: and difficult, the suffering of the patient being rendered more distressing by constant efforts to expel a viscid secretion from the tonsils and pharynx, upon examining the throat, their is considerable swelling of the tonsils, uvula, and soft palate, with

florid redness of their surface, which extends to the posterior part of fauces.

In grave cases, small patches of a dark hue are observed in the inflamed membrain, at which point there is an exudation of coagulable lymph, of a greenish white appearance which unless examined with care, may be mistaken for a slough of the mucous membrane, but by directing the patient to clean his throat by means of some simple gargle, by which this exudation may be removed the membrane will be found entire

and free from cone of any swelling
In some cases the fever is seen
to proceed or accompany the
sore throat, in others it is delayed
untill the appearance of the rash.
It is generally, from its commen-
-cement of a more active kind
than in simple scarlatina,
indicating a severe form of disease
on the second or third day, as
the inflammation of the throat
increases and becomes more urgent;
there is generally an augmentation
of the fever, the debility is greater;
the respiration oppressed; the
temperature of the skin rises
to 106° or 108° sometimes to 109°

There is very urgent thirst; and the tongue especially at its tip and edges, assume a scarlet hue while the papillae are much enlarged. As the evening approaches there is an exacerbation of fever, with extreme restlessness and often delirium during the night.

In this form of scarlatina the rash does not observe the same regularity as in the simple. It does not commonly appear so early but is often delayed to the third or fifth day and generally comes out in scattered patches on the chest and arms.

In some cases it is confined to

the back of the hands and wrists. and sometimes wholly vanishes, then after its appearance and re-appears partially at times, so that its whole duration is longer than in the simple form of the disease about the fifth or sixth day it begins to grow sensibly paler, following the same order in its decline which it had pre-viously observed on its appearance, subsiding first on those parts which it had previously occupied, desquamation of the rash, though this is by no means an uniform occurrence, seeming in some measure to depend on the intensity or

duration of the previous eruption, for when the latter has been slight and of an evanescent character, desquamation seldom follows. The fever and the inflammation of the throat begins to abate with the fading of the eruption, though sometimes the sore throat and some degree of fever continues for a week or ten days after the rash has entirely disappeared.

This description which we have now given of Scarlatina anginosa, is that type of the disorder as it is usually observed, without any complication. But it sometimes assumes a very aggravated form,

Thus, in addition to the symptoms already described, there is sometimes an acrid discharge from the nostrils and ears, frequently accompanied with depression and inflammation of the parotid and cervical glands, terminating in suppuration of the cellular tissue. But although these accessory complications tend to keep up the constitutional symptoms, and prolong the duration of the disease, they do not materially add to the danger, as they generally subside in a few days on the disappearance of the more characteristic symptoms of the disease.

Scarlatina maligna is a most terrible disease. Its symptoms, at the commencement, differ but little from scarlatina anginosa yet at a very early period, its formidable nature is readily detected by the careful diagnostician. Thus, the fever assumes a very low grade, the heat of the skin is less intense, and there is great disorder of the functions of the brain with small, frequent, and often irregular pulse.

There is at the same time dull redness of the eyes, with a darkend flush on the cheek the patient is restless, fretful and at times delirious; the delirium is

sometimes violent but more generally it is of a low muttering kind.

The tongue quickly becomes dry and brown, or red, up and down and so tender and chapped that a slight touch causes it to bleed freely.

The teeth and lips are covered with sordes and the odor of the breath is extremely offensive. The throat has a dusky appearance, there is not much swelling, but dark incrustation forms on the velum, uvula, and tonsils, which are not as has been generally supposed sloughs, but merely exudation of lymph and false membrane. In some cases however there is gangrenous inflammation of the

parts are now destroyed by the sloughing that succeeds.

There is at the same time an acrid excoriating discharge from the nostrils, and a viscid secretion from the fauces, impeding respiration and producing a rattling noise in the throat. The inflammation in severe cases, spreads to the posterior pharynx which though not swollen, is so irritable that an attempt to swallow fluids, they are rejected through the nostrils.

The inside of the lips and cheeks are frequently covered with epithelium and the cervical and sub-maxillary glands becomes inflamed, abscesses occasionally

forming in the cellular tissue.

The rash is extremely irregular as to the time of its appearance and duration. It often comes out at a late period of the disease and disappears after a few hours; or it vanishes suddenly, and is again renewed several times during the course of the disorder. Its color is generally paler than the other varieties, except that here and there in irregular patches, it assumes a deeper hue. In some cases there is a great tendency to hemorrhage from the mucous surface, either from the throat, nostrils, intestines or urinary canal, the latter often appearing upon the skin and the patient

gradually sinks, unless the constitutional powers have been previously very vigorous. In many instances this variety of the malady terminates fatally on the third or fourth day. In some rare cases, it has been known to prove fatal on the second day. In the latter case, life appears to be at once extinguished by an intense impression of the poison upon the great nervous centres.

Even before the rash has had time to be developed, the patient's existence is suddenly terminated with convulsions or coma.

The latent scarlatina hardly admits of a separate description; its

symptoms appear to consist of a mixture of those of the other forms of the disorder, and pursue no regular order in their development: And if it was not for the prevalence of the disease, in the family or neighborhood of the patient it might be mistaken for several other disorders of a kindred type,

As in other forms of the complaint, the attack is commonly sudden, the patient at first becomes, pale and faint: In a short time he complains of pain or giddiness in the head, attended with oppression and uneasiness in the region of the heart or pit of the stomach, sometimes he sinks, as if overcome by a unconscious

and lies in a state of confusion and oppression without making a single complaint. At other times, he may walk about, pale and languid for a day or two, and then take his bed, like an individual exhausted by some great fatigue or mental anxiety. When the disease has become fully and decidedly established, the pulse is commonly feeble and intermitting, the respiration irregular, and not unfrequently very slow, the eyes dull but sometimes glassy, the mind which at first was confused and dejected, becomes delirious, and the patient soon expires, either in coma or convulsion. In this form of,

scarlatina, there is commonly very little sore throat, no enlargement of the glands of the neck and no eruption on the surface of the body.

This form of the disease frequently runs its fatal course in two or three days from the commencement of the affection.

Complication of scarlatina.

In every form of this disorder we frequently meet with complication that demands our especial attention, such as inflammation of the membranes of the brain, pleuritis, peritonitis, nephritis, pneumonia, pharyngitis, laryngitis and gastro-enteritis; but we shall

remember that the various serous membranes of the body are more apt to become inflamed in this disorder than the parenchyma, and is therefore always more dangerous. I believe it may be stated as a general fact that more patients die with these complications than the primary disorder. They may attack the patient at any stage of the complaint and if not promptly arrested terminate his existence in a very short space of time. Each of these complications will, as a matter of course, produce their own special lesions and symptoms but I have not time on the present occasion

to treat of them as fully as
their importance requires

An
Inaugural Dissertation
on
Opium
submitted to the examination
of the
Provost, Regents & Faculty
of
Physic
of the
University of Maryland
for the degree of
Doctor of Medicine
By
J. Conrad Hunter
Berkeley County
West Virginia

session 1866 & 67

Opium

This medicine has been known and used from the earliest periods. It was employed as a medicine in the first centuries of the christian era, but its application was not general or extensive until about the twelfth century when its virtues were discovered: it was about this time that Sydenham and his contemporaries employed it with such frequency and with such beneficial results.

Of this medicine there are several varieties, among which are the Turkey, the Egyptian East Indian, Persian, and European. These varieties have also been subdivided, for example, into one or more

varieties of the East Indies, or as
mains of the Turkey, have been dis
covered. In common, however, the
only distinction made is the varieties
previously mentioned.
As found in this country the Tu
rkey opium is considered the best. It
comes into our markets in the form
of irregularly shaped, flattened balls,
varying from one to half to two
pounds. It is of a dark brown color
externally, but of a lighter and red
dish color internally. It is hard
to cut when it is extremely dry. It
is stated that when it is fresh collected
it has a dark red color, but soon
turns to this [illegible] a dark brown [illegible]

[illegible] exposure to the air.

As seen in the boxes in this country it is generally of a dark brown color, and if it is a good specimen, exhibits, when broken open, a number of shining specks distributed all through it. Possesses a pungent odor & bitter taste. This variety yields, on an average, about [illegible] per cent of the active principle.

Of the other varieties, little [illegible] to this country. The Egyptian does sometimes appear in our markets, but it may be readily distinguished by its being of smaller size and by its being in [illegible] cases; these cases rarely exceed half pound in weight, more

generally weighing from four to six ounces: it is described by Dr Dunglison as [illegible] and dry, and of a waxy lustre. This variety is inferior to the Turkey, yielding only about [illegible] per cent of [illegible] principle.

Four varieties of the East India opium have been described – the Malwa & the Bengal opium. The Bengal is seldom met with in this country, it is the most inferior of these four varieties: it is in balls, used by the Chinese for smoking. It appears in balls weighing about [illegible] pounds – which are found to consist of a capsule made of the [illegible] surrounding the opium-[illegible]

[illegible]

is said to have been greatly improved by cultivation.

The Malwa was at one time considered to be inferior to the Bengal, but at present time has obtained some reputation. It appears in small flat cakes weighing from eight to ten ounces and resembles the Smyrna Opium except that it possesses a less pungent smell and a less bitter taste. It is said to furnish only one third the amount of bitter, or rather active principle that the Turkey Opium supplies.

The Persian Opium appears in cylindrical sticks. It does not harden on exposure to the atmosphere as the

[illegible]

[illegible] has a bitter taste and pale [illegible]

[illegible]. It is regarded as very inferior to any of the varieties mentioned.

European Opium. Under this name [illegible] classes those varieties of the opium that is raised in Europe, viz. in England France & Germany – it is similar in appearance to the Turkey part [illegible] here. In the countries [illegible] same kind precisely, but all presenting a similar appearance. As a general [illegible] this opium is not of good quality although some specimens have produced a large amount of the active principle from a [illegible] since the [illegible]

of the Turkey opium at [illegible]
the low price at which the Turkey
opium is [illegible] [illegible]
the importation of this variety
profitable. Of the different varieties
of this drug already described, there
are some characteristics common
to all. The bitter, pungent taste
and strong peculiar odor are the
principal, but they exist in a
greater degree in some of the varieties
than in others. With the exception
of the Persian & one of the varieties
of the East Indian opium, it is
hard or inflexible. The two varieties
above mentioned are remarkably
soft or yielding to the ex-

It is easily powdered or [illegible]
and when in this condition [illegible]
be kept in a dry place and in
closely stopped bottles because of its
[illegible] attracting [illegible]. It
is frequently adulterated and it
sometimes requires [illegible] to
detect it. You can not [illegible] it
from small stems [illegible]
and stems of leaves &c.

Opium is also adulterated in the
following manner – it is allowed to
stand in water for a length of time
sufficient to extract a large [illegible]
of the active principle which the
opium is sold as if it had never
been deprived of it [illegible]

It is extremely difficult to decide adulterations of this kind, and we must be left to the wisdom and skill of the chemist. As a general rule it has a dry, drying, [illegible] strong odor, and bitter taste, and the [illegible]. It is said that if you draw a line of opium across a piece of white paper, and it leave an interrupted mark that it indicates a good quality.

The method of forming opium is very nearly the same in all countries. It is prepared in the following manner — At a time when the poppy is about half ripe, when it is about the size of a hen's egg

it is cut by an instrument made for that purpose, and after it is cut on the outside, the inside is hardened. It is now scraped off and formed into cases or balls when it is laid away for a month or two to dry.

The value of the principle of the opium only exists in the shape of the gas able it is about half rife, hence the necessity of securing the gas at the proper time.

Preparations of Opium. Of these, we have quite a number; some of them are not much employed in the practice of medicine, while others have a wide range of application

[illegible]

[illegible] preparations the part of the medicine the Tincture Nux Vomica of [illegible] at the rear of the list, being employed to much greater extent than all the others with the exception of the [illegible].

The next important of these preparations are the Tr. Opii, Tr. Opii Camph: the Acetum Opii, Vinum Opii, the Extract and the active principle – morphine.

The Tincture is most frequently used because of the convenient form of its administration, and of its rapid & prompt effect. The Camphorated Tincture is especially applicable to children and to delicate females, it being a milder form of [illegible]

medicine on account of the ingre-
dients which it contains.
The other preparations of the vinum
opii are active opii do not differ
from those just mentioned in their
action, but in their strength and
mode of preparation. It is necessary
to have all these preparations because
you will often find certain persons to
whom you cannot administer one
of them preparations, on account of
idiosyncrasies or some other circumstance
contra indicating it, while an other
preparation may have the desired
effect. The next, and perhaps the
most valuable preparation, is morphia
and its salts.

Since [illegible] of the [illegible]
ering Morphine, it has obtained
great reputation & to great extent has
supplanted many of the other preparations
of Opium, because it is much less
liable to [illegible] than the [illegible]
effects of Opium in other forms, such
as laudanum, [illegible]
When I speak of Morphia, I refer, of
course, to its salts, of which there are three
the sulphate, the muriate, and the acetate.
Morphia is obtained from Opium in the
following manner. The Opium is first
pulverized and mixed with a certain quantity
of water. The water dissolves the mucilage
of Morphia. You then add a solution of
Ammonia which combines with the

meconic acid forming [illegible]
ammonia and sets the morphia free, and it
is [illegible] by means of [illegible]
alcohol, when it is fit for use, although
it is rarely employed as a medicine in this
form. It exists in the form of white [illegible]
[illegible]
[illegible]
There are several other constituents of
opium which have been isolated and
examined by the Chemist, there are only
two of them [illegible] morphia
Codeia and narcotine, but little is
known of [illegible]
[illegible]

Codia or Codeia is a white [illegible]

a vitreous alcohol and Ether, unites with acids forming salts. It is supposed to possess the virtues of a narcotic and similar in its effects to morphia; but it is not about one half as strong as morphia. This now has been called to manufacture.

Narcotine is a white, solid, tasteless, inodorous preparation. It is obtained by the action of Ether on the Extract of Opium, the narcotine is dissolved in the Ether, while the other is insoluble and remains unchanged, the Ether is then driven off by evaporation and the narcotine precipitates. In this manner it is said to resume the exciting pro

[illegible] good authorities. The truth seems to be that little is positively known of this constituent, [illegible] statements made by different chemists in reference to its properties, and mode of action it is most impossible to form a correct idea of its real virtues. Narcotine is intrinsically better, much more better than Morphia when in combination with an acid forming a [illegible] salt, however, do not appear to be permanent. There are several other constituents of which [illegible] is known that I will not [illegible] mention them specifically as they are of no practical importance

In the employment of this medicine [illegible] patient [illegible] [illegible] [illegible] [illegible] pain. Few remedies in the Materia Medica have a wider range, or a more [illegible] of applications and indications which it fulfills, [illegible] be found to exist in a great number of diseases which are seen in this Country: to specify all the cases to which this remedy is applicable, would require a much more lengthy and detailed account than an article of this kind [illegible]

In that stage of disease where pain is one of the characteristic symptoms no medicine acts so promptly and efficiently as [illegible]

Again, in those diseases in which [illegible] or restlessness is a distressing and [illegible] such as the delirium of drunkards and others of a like nature, no medicine, or no other narcotic acts more beneficially nor [illegible] can be better relied on.

Dr Hood has said "no medicine is so efficient in relaxing spasm and in controlling [illegible] muscular movements as depend on [illegible]." Hence the employment of opium in such diseases as tetanus, spasmodic stricture of the Ureter or of the Gall duct, [illegible]

[illegible]

in those of the intestinal canal."

The use of Opium in combination has been [illegible] to [illegible] with [illegible] and Hartshorn. One is familiar with the pleasant effects which follow the administration of even a single dose of the well-known Dover's Powder when from excessive mental or physical exertion it is impossible to procure sleep. When given in small doses Opium as a stimulant or excitant has sometimes been employed in this way. While in large doses acts as a sedative [illegible] Opium acts first as an Excitant

[illegible] dose is of very short duration passing off quickly and giving place to the sedative effect of the drug.

The [illegible] in which Opium produces its effect upon the system seems stated by different writers; the view generally accepted is that it is taken up by the [illegible] and through the blood produces its effect on the nervous system. The general terms the effects of opium may be stated as follows. When given in moderate doses it induces sleep, relieves pain and relaxes spasm and diminishes secretions, but in some particular cases it acts in directly a contrary

manner. Instead of sleep, it may produce wakefulness — in place of stupor, delirium, and cases have been known where it has produced the most violent coma. These effects are rarely met with, and when they do occur can be combated by appropriate treatment — by withdrawing the form of the drug and substituting another. You will often find that some one of the preparations can be administered without giving rise to these unfavorable results.

The usual mode of administration is by the mouth, although in many cases where this method is impracticable it has been found to work [illegible]

[illegible]

when given in this way it is necessary to employ about from two to three times the amount ordinarily [illegible]

Other methods have been resorted to. The Endermic method is by [illegible] the cuticle and [illegible] for, time on the denuded surface. Another mode is the Hypodermic method viz: by injecting a concentrated solution of morphine under the skin by means of a small instrument [illegible] for that purpose.

The advantages of these two methods which [illegible] to the fact that the skin [illegible] are not so offensive.

[illegible] the [illegible] therapeutic effects for [illegible] combined [illegible]

The use of Opium in Inflammatory diseases is generally contra-indicated on the [illegible] that Opium is a stimulant [illegible] writers, and others [illegible] that it should be employed on account of its [illegible]

From the amount of evidence adduced, there seems to be little doubt of its efficacy in the treat=ment of acute Inflammation with a single exception - viz: the Brain and its investing membranes -

Although Opium has for a long time been given in Delirium Tremens - yet since the pathology of the disease has been more clearly understood, other remedies better calculated to fulfil the exciting indications have almost entirely supplanted it.
In the consideration of this subject I cannot forbear to mention those unpleasant results which follow the employment of the drug in excessive quantities - or in other words the poisonous effect of opium.
After opium has been taken in poisonous doses the following symptoms soon begin to manifest themselves. The Pupils are generally contracted throughout the whole period.

there is profound stupor, from which the subject can with difficulty be aroused. the pulse is quick - respiration hurried & more or less insensibility. These symptoms are soon followed by profound stupor. pulse full & slow, respiration slow and laborer. In a short time all these symptoms are exaggerated - and death by coma generally terminates the scene. The length of time required to produce death in all these cases depends on the quantity and quality of the drug - and the form - or preparation - as well as - various circumstances modifying the susceptibilities of the patient by whom it has been employed - I have scarcely time to refer to those anatomical

changes which take place after death from the poisonous influence of opium; but one, especially attracts our attention viz: the congestion of the Brain: and this fact furnishes us with the explanation why Opium is contra-indicated in inflammation of the Brain and its membranes.
The rational indications in the treatment of poison by Opium, are first to remove it from the system, and secondly, to administer such remedies as will counteract the poisonous of the Drug: thirdly to keep the patient alive by means of artificial respiration &c, until the poisonous influence of the Drug had passed off.
At first we employ Emetics consisting of Salt & Mustard: the sulphate of Zinc &c.

Next we resort to the use of diffusible stimulants. Coffee and Belladonna may be employed as physiological antidotes with the happiest results. A constant stream of cold water poured over the neck and shoulders, Galvano-Electricity and constant motion constitute the most rational means of fulfilling the indications before mentioned.

Although there are many other interesting facts connected with this subject I can do nothing more than give a general outline of the prominent characteristics of this important medicine, and to note briefly its extensive range of therapeutical application.

AN

Inaugural Dissertation

ON

Puerperal Fever

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Harrison Clay Ward

of

Maryland

Session of 18 61

This disease, the nomenclature of which, from its earliest history, to the present, seems to have been a question of dispute, among pathologists of all lands, is now in my opinion, defined to be Typhoid or Enteric fever.
I propose, therefore, in accordance with this nomenclature of this disease, to give a brief account in the form of a Thesis, commencing with history & ending with treatment of same.
Typhoid & Typhus fevers, were

for ages, considered identical in every respect, requiring like treatment &c! Strange to say, this theoretical doctrine, for it must be acknowledged, that it was strictly theoretical, was supported by many of the ablest physicians of that day, in the face of the well existing & well marked, but imperfectly, understood diagnostic marks or signs — nor is this important discovery in diagnosis of such ancient date, as will be shown hereafter. Not then, until, the march of science & correct investigations, had fully proven beyond the question of dispute, the nonidentity of these two diseases, could these able advocates of its sameness, be induced to yield their former convictions, & become supporters

of the present theory, which properly considered them as widely different as Pneumonia & Pleurisy, a theory not inexplainable, as was the former, in relation to their non-essential difference, but readily explainable upon both theoretical & practical grounds, deducible as it is from well marked signs & symptoms, not easily confounded with any other form of fever or disease. Enteric fever is a common febrile affection, presenting in its progress, a diversity of symptoms, which may possibly in its earliest stage be mistaken for Remittent or Intermittent fever, yet presenting to the eye of the careful physician, symptoms of a certain recognizable character, not easily mistaken for any

other disease or confounded with any other form of fever, however closely it may simulate them.
It is endemic & by some supposed, to be contagious & produced or generated by the decomposition of animal matter.
Symptoms of this disease, may with propriety be divided into three stages.
First stage. Typhoid like, Remittent or Intermittent fever is generally, announced by a chill, followed by the ordinary phenomena of fever, — or it may occur, as it most frequently, does in this country, insidiously, the patient feels unwell, complains of headache, thirst, sense of weariness, pain in limbs, more especially, about the knees, great fatigue consequent upon the slightest exertion, with

a decided tendency to sleep.
Skin heated, face greatly flushed & pulse accelerated, numbering 115 or 130 pulsations per minute.
A marked symptom of the stage of the disease, more or less severe, produced by pulmonary congestion.
The appetite, generally, with the majority of authors is greatly impaired — not necessarily so, however, as the contrary is frequently observed — in fact the appetite instead of being impaired is greatly increased, the increase in a great number of cases being excessive. Typhoid patients commencing with impunity articles of food, which in all probability would have disagreed with them in a state of health, owing it may be to a peculiar tem

of stomach, the precise exact of which we are ignorant - Such notwithstanding, being the case. I am aware that this statement in relation to an increase of appetite, in this disease, is somewhat at variance with the teachings of a majority of authors, but having carefully noted, this well marked feature of the disease in a great number of cases, added to the experience of many, with whom, I have conversed, in relation to this feature, I feel prepared to say, absence of appetite, is not necessarily, ~~present~~ an accompaniment of the disease in either the early or more advanced stages of the complaint. Loss of appetite is not as some would have us believe a characteristic of typhoid fever.

Second stage of congestion.

The disease now quickly exhibits the order and succession of symptoms of Cholera morbus, such as diarrhœa or bilious vomiting, cramp, &c. &c. & finally on reaching the great thirst &c.

The pulse in this stage of disease, numbered 110 or 120 pulsations per minute, now increases to 130 to 150 beats a minute. The pulse grows weaker & more compressible, instead of full strong & resisting, as in first stage of disease. The first stage instead of assuming that livid colour so well marked in the second stage, now takes on a purple tint. Nails, however, instead of a livid tint, we notice a dark tint or cast, and in well a certain

dullness of expression, not apparent in some, but seen in others. Tongue somewhat in great stage of fever, amounted to a slight sore-ness of membranes, now becomes greatly increased, together with much anxiety & restlessness, with occasional bleeding from the nose. These symptoms, which are nearly the same, as those found in first stage, only in an aggravated form, continue for several days, when the patient passes, into what, we may, with propriety term the third stage, when the following symptoms become apparent.

Third stage.

Increased fever, pulse from 80 to 100 per minute very weak. Tongue brown moist & clammy, now becomes in this the third stage the

to run, with edges greatly reddened.
Exudation becomes manifest, at first
in distinct, rose coloured spots, like
their appearance, usually a few in
number, at first, but gradually increas-
ing in number, until the chest
becomes literally covered.
Vesicles are occasionally found
upon neck & upper part of chest,
also upon other portions of the body.
Nervous symptoms become more
decided. Delirium succeeds stupor,
tinnitus or buzzing in ears is followed
by deafness, urine becomes
acid & watery, albumen, bodies
peculiar to urine in dangerous
cases, deposits a uniform sediment
resembling the urine of
typhoid patients, it will be
noticed of two specimens marked
continuing albumen.

and abnormal character.

There is not a organ of the body in which lack of circulation may not occur. The usual manifestations both in of the current order occur. The effects consistance in the nervous, in frequent & intermittent pain, is greatly increased in size from its normal voltage. In excellent cases the thyroid is found to be small, firm, etc, normal size & reduced to the condition of a fibrous mass, so completely softened that the frequency of its appearance through it. The liver is also enlarged & softened but in a much less degree than the spleen. The heart is also occasionally softened & when so it degrees unlike the softening of other tissues or liver.

Other lesions must be met with in this disease, as ulcerations of the mucous & cartilaginous lining of the intestines; relaxation of the sometimes inflammation of the meninges of the brain with exudation, although this latter lesion is but seldom observed. There is however in addition to the above strange anatomical change, which is actually characteristic of this disease, which is so seldom absent that it may be considered essential — viz. the affection of those minute bodies, denominated the glands or follicles of Peyer. This lesion of Peyer's glands is of such constant occurrence, so seldom absent, that it may with propriety be said always to exist, thus constituting a reliable guide to the nature of this most fatal disease.

tonsil.

The epidemic prevailing on the contamination of drinking water. It appears to originate in persons poorly ventilated hospitals, crowded with sick patients. Some attribute it to contagion. This opinion has been supported by many able physicians both of Europe & America, while upon the other hand it has been denied by men of like ability. If it be contagious, which is very doubtful in the true acceptation of the term, it is so feebly transmitted under circumstances. But the disease may be propagated under certain influences, does not admit of doubt. In my opinion, while rejecting, or rejecting the two theories, in regard to its contagious character so far as its contagiousness is concerned, that every thing

depends upon the state of health of an individual visiting Italy.

In addition to the above causes numerous predisposing causes may be cited, the principal of which is age. For instance, typhoid or Enteric fever, is seldom met with in Italy over thirty or forty years of age, whilst it is seen at all periods of life up to that age. Probably, with Cancer it is a disease of youth.

Climate, vicissitudes of life (so-bought to say) of weather & mental disturbances, also act as causes in the production of this disease.

Miasmata in malarious districts, also act as a predisposing cause or as an exciting cause — so too may decomposing vegetable substances, aid in its production, as is frequently observed in malaria.

diseases.

Lastly the rheumatic fever having ceased, may be classed, an inherent predisposition on the part of many patients, analogous in some measure to the gouty, tubercular & rheumatic predisposition.

Diagnosis.

The characteristic symptom of the disease, is the mode of attack, the patient moving to rise, apparently in good health, experiencing very little inconvenience save a few slight pains in limbs.

Appetite contrary to the practice of Lent boots seldom affected if affected, rather increased than diminished. These symptoms continue for several days, when more marked symptoms become apparent, the patient being attacked

with diarrhoea, a well marked character of the disease, with a dull, heavy expression of countenance, a dusky hue of face, with a tendency to phlebitis, a slight cough occasionally in severe cases bronchial rales, great dryness of tongue & general diminution of all the secretions.

Then we have the rose coloured eruption, sudamina, dryness, stupor, delirium, tympanitic abdomen & enlargement of spleen, frequently sensible to the touch or discoverable by percussion, together with the duration of the disease.

All the above mentioned symptoms, are not necessarily present, the absence of a few, however, not hindering us from making out a true diagnosis. Some of the symptoms herein described may, as in general is the case be absent, yet

a sufficient number, will be found to enable us, with a little tact, to arrive at a correct opinion, as regards the diagnosis of this fever from all others, however it may simulate them.

One of the diseases, with which this fever, is frequently confounded is Remittent fever. The distinction between these two forms of fever is quite apparent, when we take a survey of the case & enquire into its history. For instance in Remittent fever, we have well marked remissions which is not the case in Typhoid fever. I do not say there is not a remission or abatement of fever even in Typhoid or Enteric fever. I am well aware of the fact that there is a well marked abatement or remission of fever in Typhoid cases. This

difference in the development of Typhoid or Enteric fever differing so much from that which occurs in Remittent fever in point of regularity & degree. For instance in the latter fever, the remission is quite distinct & occurs at regular or stated periods, whereas in Typhoid or Enteric fever such is not the case. The remission or, properly speaking the abatement occurring at any time in point of degree not so well marked as in Remittent fever. The former is a matter of vital importance, so far as regards the diagnosis of Enteric or Typhoid fever, when compared with other & it may be said that characteristic & pathognomonic sign of the disease. In Remittent fever there is great deterioration of skin, the patient has a [illegible] indeed a [illegible] severe

cumbent, which not the case in the thyroid case. On the contrary instead of the usual enlargement of the thyroid gland, presenting a tumor like it assumes a clubby shape &c.

Much more might be said in relation to the diagnosis of these two diseases, but forming an all except to point the marked difference between these two diseases even in their phases of closest resemblance. I will attempt the present mode of explanation of their marked difference in respect to the diagnosis of Thyroid or Goitrous from a true tumor. For the aid in the art important art of diagnosis, the profession is greatly indebted to Richard or Friendenthal, who together with Hennock, proved contrary to the teaching of many eminent men of both of Europe & America that

Typhoid & typhus fevers are not in any sense identical, but under different circumstances are much so as Typhoid or typhus fever is different from intermittent fever.

A marked difference exists in mode of attack between typhoid & typhus fevers, typhus & typhus fever, commences or sets in less insidiously than typhoid fever & is of shorter duration, it seldom lasting longer than twenty or twenty one days, whilst typhoid or enteric fever lasts at least that days if not a longer period of time. In typhus the eruption consists of a mulberry rash coming out between the fifth & eighth days & lasting until the termination of disease, the skin at same time presenting a dusky & mottled appearance.

In Typhoid fever the eruption is formed of rose coloured dots or spots, coming out between the seventh & eighth days, making their appearance in successive crops & gradually fading & vanishing, every two or three days. In Typhus, instead of diarrhoea constituting a diagnostic mark as in Typhoid fever we have constipation. Hemorrhage from bowels frequently present in Typhoid fever never present in Typhus.

Among other diagnostic marks existing between the two diseases, may be mentioned the season of the year at which the two fevers are most likely to occur, thus Typhoid occurs most frequently in the fall & winter, whilst Typhus occurs generally during in winter & spring.

Typhoid fever is endemic, rarely epidemic & not contagious, in the true sense of the word.
Typhus fever prevails as a general thing, epidemically, most assuredly contagious & may be communicated to those, whose constitutions are not in the slightest debilitated or impaired.
Prognosis. Whilst in this country Typhoid fever is considered a severe disease, it is nevertheless not a fatal malady. Judging however from statistical reports, it is certain that on some occasions it is exceedingly fatal. This in hospital practice, it may be considered more dangerous, than in private practice, being due in all probability to the crowding of large numbers in small poorly ventilated wards.

Agreeably, with Wood fever disease, exhibit more readily, the controlling influence of medicines than Typhoid fever — for this reason the prognosis, in the majority of cases, unless complicated in some way, may be said to be favorable.

Treatment. The treatment of this disease, is in many respects, the same as that in Typhus, with, two or three exceptional points. When patient is first seen, emetics do good. Vini Opium ℥i repeated every twenty four hours, for several days, exerts a beneficial influence. Quinia Sulph, given in large doses, in the early stage of disease, is supposed by many to be of service, believing as they do, that it has the power to cut short the disease. That Quinine does good in

the early stage of disease, we
does not admit of doubt, not
accomplishing the good influence
by exercising what some men of
ability call the abortive effect,
but merely as a tonic, does it
exert any influence on the early
stage of this disease.

Aperients should seldom be given, as
in all probability, the bowels
will act spontaneously, if not with
a decided tendency to diarrhoea.

Yet it is thought advisable even
though a moderate looseness of
the bowels be present, to evacuate
their thoroughly, in order to correct
or obviate the injury arising from
the contact of any irritating matter
which may be present with
their lining membrane. For
this purpose we employ a small
dose of castor oil, aperient, such

as Magnesia Sulphate or Rhubarb.
If there be as there frequently is much irritation, Oil would serve a better purpose than Magnesia — in fact in this disease where intestinal irritation is present, Oil should be preferred to all other purgatives.
Suppose there be present accompanied with diarrhoea, then add to the Oil, Tr. Kino gtts xx.
The state of bowels must be carefully attended to throughout the complaint, remembering that no aperient will be required unless, as is sometimes the case the evacuations are scanty & sometimes wanting, which condition be it remembered is of rare occurrence. As a rule enema should be used to procure at least one fecal discharge daily, or every other day.

the smallest medicinal dose; the minute dose would be indeed seen in instances as a fidelity under a physician's hand. But as is frequently the case great sources of treatment are overcome. Magnesia would answer a most valuable purpose than either the oil or fidelity powder, by way of correcting the acidity that may for present. Rhubarb & Soda or any of their combinations are well adapted in a good case in the advanced stage, whenever a purgative is required.

The bowels having been evacuated, the next indication is to obviate the febrile symptoms, but not in my opinion, in accordance with the theory taught by some & practiced by others, not in accordance with that doctrine inculcated by some

of our great minds, who delude rather than instruct, pull down rather than build up, — not for instance in accordance with the theory of one of our greatest minds who says "if the heart be full & strong & active congestion or inflammation of the brain or any other vital organ be present, blood must be taken from the arm to the amount of sixteen or eighteen ounces & repeated if necessary". Now in a thousand cases, how often would congestion of so formidable character take place; probably one, for it must be remembered, Typhoid or Enteric fever is adynamic from beginning to end, consequently in the majority of cases, with which we daily are brought in contact, we would seldom see the ordinary symptoms of

of congestion [illegible] [illegible] [illegible]
[illegible] raised a [illegible], as the
advocates of true science and [illegible]
treatment would have us believe,
in opposition to experience & reason.

Typhoid fever never calls for
depletion, except in cases so rare,
that they seldom come within
the scope of conjecture. On
the contrary instead of depleting
it will be found necessary to
husband the strength of typhoid
patients from the beginning to
the close of disease, knowing as
we should, the true nature of the
disease, — moreover being aware of the
fact, judging from statistics, that
just in proportion, as depletion in
typhoid fever, finds an advocate,
does the disease grow fatal, until
depletion is now frequently considered
a factor of the past, rather than

a theory of the disease.

At this stage of the disease if diarrhœa be present, as is generally the case, due attention must be paid to the bowels, the diarrhœa must be meted, — for this purpose we employ astringents combined with Opium or Ex Hyosc. Of the class of astringents, Catechu, Krameria or Tannic Acid will be found most useful, remembering that whichever we use of the astringents, we should not forget Opium or Ex Hyosc, in combination therewith, in order that the intestinal irritation, invariably present, may be allayed. If there be an hæmorrhage happens, hemorrhage from bowels, scarcely any medicine, will be found of such signal utility as Tannic Acid & Opium

with the application of cold over abdomen, at the same time freely administering stimulants in order that the patients strength may be supported.
The following prescription, given by the late Prof. Samuel Chew will be found of great service in the decaying stage of typhoid or Enteric fever.

℞

Vinum ℥j

Mistura Cretae ℥ii

Tr. Sii Camph ℥j

Dosed ℥ss every two or three hours until checked.

At this stage of the disease small doses of Hydrargyrum will do good. Diuretics will be found useful throughout the complaint, such for instance as Liq. Ammoniae Acet, Potassae Nitrat.

Tartrate of Antimony & Potassa is one of the best of our diaphoretics. Potassa Chlorate 3j in Aqua Oj, may be given freely as a cool, refreshing drink, when the fever is high. Potassa Bitartrate is thought by many physicians of the present day, to be superior to all other medicines in the treatment of Typhoid or Putrid fever, they using it in a greater number of cases, than any other single medicine & frequently relying upon it solely.

In case of great restlessness at night, it is well to give a bland opiate, provided, no contraindication exist or intervening, for many nights in succession to 7 doses, repeated if occasion require it.

Among the many medicines thought to be of great use in this

disease, may be mentioned the Sulphites & hyposulphites of Soda & Magnesia. When the Sulphate of either Soda or Magnesia is prescribed, it should be given in doses of ℥ss to ℥j every two or three hours during the day, so that ℥j may be taken during the twenty four hours. This plan of treatment with the Sulphites & hyposulphites is highly recommended & we commend highly, that my respected friend Mr Stevens, who has tested the plan of treatment on several occasions to his entire satisfaction. In giving either the Sulphites or hyposulphites they must be given in a large quantity of water, in order to be more speedily absorbed, & their action more speedily obtained.

cordial & nutritious. It is highly recommended, in typhoid fever during its latter stage, upon the ground that it forms a constituent of the body, thus supplying the amount of food necessary to compensate for the loss of tissue, constantly going on. Whether this theory in regard to the action of cordial & nutritious food in typhoid, or Enteric fever, be true remains as yet to be established. The method is however frequently employed in this disease & with great benefit, the action upon the system be what it may.

Should the symptoms not yield, under this treatment, should the tongue become very dry & great prostration of strength, then we have to adopt in good earnest the stimulating plan of

treatment. Nor indeed is it prudent to postpone stimulating. In my opinion, hundreds of patients are daily, lost by not commencing to stimulate at the proper time or period of disease & when commenced, not carried to the degree, that it should be. The time at which we should commence to stimulate can only be learned at by carefully noting the progress of the disease. The observance of the following rules, well made use with a little tact & discretion, to determine at what time to commence stimulation, whether it be Brandy, Wine or Alcohol.

If tongue becomes dry & baked, it does harm — if moist it does good.

If pulse becomes rapid, it does harm — if reduced in frequency it does good.

If skin becomes dry & parched it does harm — if moist it does good. If breathing is hurried & restlessness is increased, it does harm — if the breathing becomes slower & restlessness is diminished it does good. The observance of the above rules will be found of great service & will aid us materially in the proper & timely administration of stimulants, whether the stimulant be Wine, Brandy or Alcohol, remembering that these three principal agents of the class of stimulants, although powerful for good when judiciously employed, are unlike potent for evil when used unwisely. We must therefore, prior to resorting to stimulation, too lavishly, as is generally the case, be sure that the system requires it.

among the class of stimulants Brandy will be found superior to all other, when properly used. In the advanced stage of the disease, when there is, as is invariably the case great prostration of the powers of life, whichever of these principal stimulants we employ, Alcohol, Brandy or Wine; we must use them freely, yet judiciously, having as I before remarked, an eye single to the wants of system.

Oil Terebinthinae has been highly, recommended by some more highly, than Dr. Wood in his plan of treatment. The following prescription will be found of service in Typhoid or Enteric fever, more especially, in the advanced

stage, when accompanied, with prostration, tenderness upon pressure in abdominal region.

℞

Spir Terebinthinae ℥ss
Tr Gentianae Comp ℥iss
Mistura Acacia ℥i.
Inf Serpentariae ℥v
Sumat. ℥ss every four hours.

Hygienic regulations.

Proper temperature say 60° or 65° F.

Food must be given in proportion to want of system, dependent as the want of system is, upon waste of tissue - avoiding the old precept or doctrine, that food increases fevers - since Physiology teaches, that cure is not dependent upon starving

patient, but on the contrary food in proper quantity must be given, in order that the system be sustained & this excessive waste of tissue consequent upon disease may be counterbalanced.

Among the many remedies applied topically, Turpentine stupes will be of service by way of correcting the tympanitic, which is invariably present.

Cold or moderately cool ablutions to surface, repeated thrice, four or five times a day, will be found of service, the legs, arms & temples preferably selected as the points or parts, ~~xxxx~~ upon which these ablutions be made.

Finally, Typhoid or Enteric fever, should be treated on the expectant plan, which after all that has been said on the subject; is the only true & successful plan of treatment, the only plan, so far as any plan goes, worthy the consideration of the true physician, at the same time being careful not to do too much, for fear by so doing we may thwart the efforts of nature, remembering that it is equally, as injurious to do too much, as it is to do too little.

The prudent physician will therefore, in the treatment of all diseases, Typhoid or Enteric fever more especially, conscious as he must be

of the fact, that medicine is but the handmaid of nature, in this disease, not becomingful of that grand old maxim "Vis medicatrix naturae", a maxim, the observance of which, will guide us as safely, in our treatment, as the compass, amid the heaving of old ocean, dictates the course of the mariner — a maxim the disregard of which, suffering humanity, but too frequently, pays the penalty, at the cost of life.

Let us therefore, not be unmindful of the fact that in all diseases, more especially, in Typhoid or Enteric fever our aim must be to guide, conduct & not thwart nature's efforts.

In conclusion, whatever plan of treatment, we adopt let it be conservative, i.e. in accordance with the requirements of the disease, laying aside our stated formulae & stereotyped prescriptions & treat symptoms as they appear & complications as they arise.

Respectfully submitted.
H. C. Ward

AN

Inaugural Dissertation

ON

Typhoid Fever

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

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of the

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FOR THE DEGREE OF

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by

J. Fred. Wirth

of

Maryland

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Typhus Fever

1

If we consider the history of practical medicine, it will be found to consist of little else than a review of the doctrine that has successively risen and sunk again concerning the nature and treatment of fevers, notwithstanding the many other objects of interest and importance within the dominions of medical science, which have attracted the attention of physicians, fever has been at all times viewed, as presenting the most inviting field for observation, and the exercise of ingenuity.

It is in this department that observation and research have been most industrious in accumulating materials, and that hypothesis has luxuriated in her wildest speculations: When indeed, it is considered that the destroying Angel has made his most desolating visitations under the form of febrile pestilences; and that in the long list of human maladies fever occurs in perhaps nine cases out of ten, the paramount importance of this subject is forced upon our consideration:
A retrospective glance over the

history of our science, forces us to acknowledge, that there is perhaps no subject that is more eminently calculated to humble the pride of human reasoning than this one.

In relation to this subject pathology has been in a continued state of revolution and instability. Theories have risen and sunk again in a continued and rapid series of succession; each has had its hours to strut upon the stage, "and its votaries to yield it faith, but the stream of time has hitherto overturned all these insubstantial though often highly wrought fabrics;

The medical world made no real advancement in relation to the pathology of fever. We know no more correct and rational views concerning this important subject than were our forefathers. Her genius always wandered in idle quest, and brought back no substantial trophies from the regions of pathological speculation on this point.

Far from it; the human mind is continually verging towards truth, and it is my opinion that the day is not far distant when it will reach it concerning the essential nature of fever;

There has probably never been a theory or doctrin promulgated on this subject which did not remove some former one, or bring to full view some of the relations of the phenomena it presumed to elucidate;
The dream of speculation is now discarded, but the facts and correct principles, which were necessarily mingled with them, remain as so much valuable treasure saved out of the wrecks of former systems.
The mass of solid materials which has been thus gradually accumulated has now in a

great minds displaced those vague, and hypothetical grounds upon which former doctrines in relation to this subject were constructed.

Hypothesis is no longer tolerated in science: philosophy does not acknowledge her as a legitimate servant; the reign of her empire has gone by, and the genius of rational induction is now the only power under whose direction, the votaries of science press forward to conquest in the fields of knowledge.

Heat does not admit of a strictly correct and unobjectional definition

It is a fact acknowledged by all clinical teachers and learned pathologists of the present day that there is not a single symptom which is invariably present, and which can be regarded as absolutely essential to its existence.

The doctrines on this subject have been as variable as they are numerous, and there is not one that will admit of an absolute and positively demonstrable proof. The human body like all others, is capable of being acted upon by physical agents, and the result, not the mode of their operations,

it all that we know, and the senses are the means by which we are apprized of them. As these instruments discover only certain phenomena without apprizing us of the subtle changes which the system undergoes, and by which they are produced:
"All that can be said is that the phenomena, are all that we know; and that, the true philosophy of medicine, is to describe their successions, with the means of their prevention and cure:
This it can do but it can do no more; As in natural philosophy it is impossible to determine the

nature of gravity on which hang the laws of vital science; so in medicine, the intimate properties of life are equally inscrutable. We therefore think that the idea of Fordyce, contained in the following words, present a true view of the subject of fever, and one which is free from hypothesis, and admit of with no but philosophy: "Fever is a disease which affects the whole system, it affects the head the trunk and the extremities, the circulation the absorption, and the nervous system it affects the muscles and the membranes it affects the body, and likewise the mind;"

It is true, on a due [illegible] to the whole system, which however [illegible] unguard at some time one part at other another.

Having [illegible] preliminary remarks, I [illegible] in general in order that my [illegible] which is upon one of the special severe may be more intelligible:

I proceed at once to treat of that terrible malady syphilis, my "Which like a beacon to distinction swept away so many of the human race, and which just such views as I have been able to collect from personal observation of cases which occurred in the

Baltimore? in my opinion, the Surgeon General's Bureau at Washington, on reading the best work which on the subject.

According to Dr Flint's history dates from the earliest antiquity, and is the only disease which calls for a differential diagnosis in typhoid fever. Both diseases have many features in common; consequently the identity or non identity of the two diseases has been within late years a mooted question, but the points of difference are sufficiently well defined to show that they are distinct

Urinary, and are recognized as such by the best authorities of the present day.

Typhus fever has no special anatomical lesion peculiar to itself, but certain morbid appearances are revealed by post mortem examination may be due to some accidental complication with or the actual presence of some other disease:

"When considering its effects upon one of the organs of the body, namely, the spleen, it might be contended with Intermittent fever, but as the principal disease from which it is to be distinguished

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in typhoid fever, I will endeavor to present the sign of disease;
In the first place it is of short duration in all its stages, & a removal does not prevent the same morbid abdominal manifestations, "namely iliac tenderness, gurgling, meteorism, diarrhoea, etc. in similar analogous diseases;
The tongue in typhus is of a dark indian color, & yellow coating than it does in typhoid fever, it is moistened & does not disappear on pressure;
While in typhoid it is pasty white in appearance, exhibits itself in little red spots, and is

his opinion than in the other diseases:

Gonorrhoea has been the macerated & painted spots are combined, and we will take time to demonstrate which is the murine marasmus;

In the case of the Negro, the diagnostic signs are not so pronounced, as the character of the cutaneous eruption is concerned, a fact which was practically illustrated under my own observation during the prevalence of the disease as an epidemic in this house.

Dr. Hunt whom I take as the leading authority on this subject being the most recent in his writings

ascribes contagion to typhus, while he considers it absent in the other; and the history of the case to which I allude, seems to corroborate this statement;

There are other signs which might be enumerated, but I shall only condense such facts as would under ordinary circumstances enable one to make a clear and unequivocal diagnosis;

The cutaneous eruption seems to be the principal land-mark for physicians; and when this is lost there is as a matter of course much embarrassment.

It has been affirmed by some

that a further aid to the diagnosis, consists in the peculiar odor which emanates from the patient, a fact of which I am personally aware, from individual observation:
The frequency of the pulse is much increased in this disease, even beyond what it is in typhoid; At this instant my memory brings before me a remarkable circumstance as regards the pulse of a patient laboring under this disease; which fell from 115 to 70 in less than twenty four hours, but from that time convalescence was established.

and the man gradually recovered his original health;

The thermometric heat is also much exaggerated varying according to the distinguished authorities I have read from 100° to 107° Fahr. In the case treated in the Infirmary, the thermometer indicated a temperature of 108°. The heat is increased in proportion to the violence of the disease and vice versa.

The general aspect of the patient is very marked, so much so that by constant observation a person is able to distinguish the character

of the disease from this feature alone:

The tongue is usually covered with thick coating of black or brown; a symptom which does not exist to a great extent in typhoid accompanied with coma; epistaxis occurs by frequently delirium is more rapid in its advent; the duration of typhus is less than that of typhoid, but a close occurrence is frequent; it is found are not so numerous, and when occurring are as a general rule of not so serious character as those of typhoid; bedsores rarely occur in typhus.

the brevity of the disease;
and what other complications
ensue such as lymphatic gan-
grenous gangrene, sloughing of
the nose palate and scrotum,
Cancrum oris &c. may be attributed
to innutrition, which latter is not
considered as one of the
primary causes of the disease.

Males seem to be more liable to
contract the disease than
females; and the fatality to
be less in youth than in adult
age.
After 30 years the fatality pro-
gressively increases and after

to years the proportion of deaths is nearly one half;
The prognosis is grave. The cause may be due as has been said to insufficient air and a crowding together of sick healthy and elderly people seems to demand a point which produces the disease:

this would suggest a hygienic and prophylactic course; namely an abundant supply of nutritious food and fresh air, which tends to subdue the malady; a fact which has been proven in the experience

of physicians in N. Y. who discovered that when typhus patients were removed from the wards of the hospital to tents out of doors the salutary effects was very marked.
And the same results were observed here, for whilst the mortality was greatly great in the wards of the Dispensary; not a single case terminated fatally which was treated in the tent, notwithstanding a similar medical course the regimen being also the same.

Another fact which recommends itself to our consideration as demonstrating the new identity of the two diseases is the distinctly specific character of the miasm generating respectively typhoid and typhoid fever.

This fact has been clearly shown by Jenner, and others in the London fever hospital, as recorded by Dr. Stint: And out of 160 cases in a given area, one only was typhoid; and of 61 cases in another not one was a case typhoid.

Various views and theories might be presented upon this subject, springing as they do from the brains of men eminent in the medical profession; by no means unconspicuous among whom might be mentioned the name of Dr. Chambers: but to condense all of them would be an infinitesimal task; and so having presented the principal pathological characteristics which exhibit themselves in this disease, together with proof of its nonidentity with other diseases with which

and analogous entities
within a very recent date.

It will now be expedient
to take up the treatment,
though there is no very marked
difference in the treatment
of the essential
fevers, requiring a prescribed period for their
ending it remains for
our pleasant to consider a
a expectant one, this
are some point which stand
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than others adapted to each
one, and frequently decision

our attention

to imaging as it might
be seen upon a genial and
liberal plane by the young
physician to observe the
various theories and opin-
ions advanced by the
best authorities, and
the various results of the
same treatment, and the
same or different, yet
when he is able to com-
prehend the mysteries of
the Science: Having cen-
tered the field of Physiology
and Pathology, he, if he
is clear, hence-beant, and

interest are lent to the subject; the old feeling of despair and lack of confidence as regards the benefit accruing to mankind, is dispelled at once; and we proceed to its study with renewed enthusiasm, and like the Israelites of old guided by a cloud of fire, the cloud of hope and confidence bright as the morning star stands forth as a beacon light guiding us to the harbor of eminence and renown.

The treatment is based by some

upon the supposed sub-acidity of the blood, and for this reason the acids are recommended. During the heat of the fever the hydrocyanic plan is prescribed. Dr. Chambers having his practice upon the theory that the poison is imponderable or ponderable is associated with imponderable agents, now directs in the onset of the disease, with a view of ejecting the poisonous material or immaterial as it may be called

from the stomach, and my own observation has convinced me that this course has produced the most beneficial result. The acid, hydrochloric, in part was used in the Infirmary, and during the whole time, having the old schools and additions in view, the patients and yard and mourning as much as the machinery of their system would assimilate.

Respectfully submitted by
F. Linen White